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THE ETERNAL MAGNET

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—J. ELLIOT ROSS, Ph.D.

THE ETERNAL MAGNET

— a history of philosophy

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THE ETERNAL MAGNET

— *a history of philosophy*

By

SIEGFRIED BEHN

Doctor of Philosophy, Professor in the University of Bonn

Translated and Adapted by

GEORGE N. SHUSTER

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TRANSLATOR'S NOTE

When I first took up Dr. Behn's account of philosophy, it was with a view to seeing whether this book so warmly recommended by leading German critics would give me the guidance I desired and had been unable to find. The result was so eminently satisfactory that it led to the constantly deepening resolve to undertake the translation, difficult as that necessarily would be to one who is not in the least an academic philosopher. For I happened to know that many young men were asking precisely the same questions as this book envisages, and it seemed natural to suppose that answers which had helped me might prove valuable to them also.

The work is now completed and offered to the public. Such errors of detail as scrutiny may detect in it are the fault of the translator, who must also regret the circumstance that German idiom is sometimes to be rendered clumsily at best. The annotations are not the work of Dr. Behn. They are supplied for the benefit of those who have little familiarity with the data of philosophical history, or who may care to delve a little further into certain problems. It was no intention of mine to make them exhaustive or academic.

It remains to say that Dr. Behn is a man fully abreast of the philosophical movement contemporary with ourselves. His own original research dealt chiefly with problems of aesthetic, from which he went directly to a consideration of other problems in educational psychology. The fact that his name is admired by those who cherish style as well as

by those who admire earnest search for spiritual truth need not be overlooked, especially in an era when the tricks of expression are too often used as an endorsement of sophists.

This book could not have appeared without the assistance of the Rev. J. Elliot Ross, C.S.P., who read and criticized the manuscript with great care and offered valuable suggestions. My gratitude goes also to Dr. D. W. Fisher, for criticisms and advice, to Mr. Henry Longan Stuart of *The Commonweal*, and to several other friends and guides.

GEORGE N. SHUSTER.

INTRODUCTION

A time which, like ours, must deal in sober earnest with so many things, is passionately interested in the problems of philosophy. Many people I know are looking for guidance. They wish to familiarize themselves with the important solutions offered by thinkers in the past, and then to form and clarify their own opinions. One might direct them to the large number of frank and scholarly books in which a truly marvellous energy of research has completed an examination of the vast material accumulated by time, and presented an easily readable panorama of the entire history of philosophy from the most varied points of view. These inquiring people are, of course, not specialists in the subject. They have no desire to join in the exploration of philosophic detail not yet fully mapped out, even though they may realize that treasure can still be dug from early or late Scholasticism, or that Arabian thought invites further consideration from competent students. The fact of the matter is simply that these special interests would not provide what they are looking for.

They want rather to know how to distinguish what is erroneous from what remains permanent. They desire to make the acquaintance of genuine thinkers personally and directly. I propose to help them neither by expatiating on novel aspects of the theme nor by trying to give original expression to what has already been well said. My plan can, perhaps, be best explained by a reference to Windelband's masterly history of philosophic problems. It is true that one can see Windelband's personal convictions agleam

in the texture of his work; nor could he have concealed them without being either unnatural or hypocritical. But as an explorer of history he does justice to all opinions, no matter how antagonistic these may be to one another, just as an artist takes delight in the picturesque contrasts pertinent to every form of life. In one important respect, therefore, the impartiality of Windelband is of no value to the friend of philosophy. He will ask in vain, Where is Truth?

It is a wholly different thing to present the essential problems and the solutions proposed for them from a partisan point of view—if the partisan be correct. Only so will absolute justice of judgment be possible. This is obviously very difficult, but it must be attempted, especially under existing circumstances. I know that the effort will bring a tempest of contradiction. It will be termed subjective, though those who hurl this epithet are themselves speaking subjectively. Let us bear in mind that a judgment is not false because it happens to be someone's personal opinion. Nor is an objection proved cogent because it is more original than the statement it contradicts. Perhaps an error takes precedence among its fellows by being an original error. But the only thing that really matters where philosophic judgment is concerned is Truth. All else is secondary:—one may be old or new, startling or platitudinous. Therefore, we must take care not to view metaphysical systems as if they were so many works of art, in the elemental and unique individualities of which we can take delight. Whatever is important and true in the worlds of thought built up during the human past, whatever must therefore be made a part of the living spiritual treasure of the modern spirit:—this it is with which the philosopher deals. This I deal with here because so many people are interested in it, bearing in mind of course that the limited space at my disposal forbids anything like argumentative discussions with

those who disagree or concur. Not every judgment presented can be fully developed from its premises. Perhaps that can be done on some future occasion. Meanwhile my task is to find expression, in contemporary speech, for reflection upon what has been said by permanently valuable thinkers in the varied languages of the race.

Views of life seem to change with time. People have tried to hold climate and geographical situation, needs and desires, blood and race responsible for these changes. Is it at all possible, then, is it intellectually wise, to trace the course of truth through the variations of philosophical systems? Tatian (who died at the close of the second century) gives a pessimistic reply: hundreds of metaphysical doctrines contradict one another hopelessly; there is no longer any use trying to think out a solution; he who has drunk in Revealed Truth will despise the speculations of philosophers. And indeed those who hope to find in the systematically organized structure of thought erected by any single philosopher the whole, naked, universal Truth, those who expect to get in one metaphysical system an exhaustive description of all Reality, must finally be driven by inevitable disappointment to share the pessimistic view of Tatian.

On the other hand, Hegel believes that all metaphysical systems can be harmonized one with the other, because they seem hopelessly contradictory only so long as the critics view them biasedly from a low level. He holds himself capable of resolving all contradictions. Leibnitz is of the opinion that philosophical harmony can be achieved if one strips the varying systems of their essentially negative judgments —their critical and polemic teachings. Justin (a contemporary of Tatian) is convinced that no great spiritual event in the story of mankind is meaningless, because the power of deep Divine wisdom is forever present in this story.

Therefore he holds that none of the great philosophical attempts to reach a solution of human problems is wholly devoid of truth.

Now a critical historian of metaphysical thought will agree with Justin without ignoring the point of view of Tatian. He finds that the norms of truth are as follows: Doubtless all the great thinkers somewhere succumbed to errors of logic; but these errors can be followed and uprooted, with the result that the systems proposed turn out to be formally correct, that is, fashioned according to rule. If the historian turns then to the world which is described by the thinker in the series of judgments formed according to rule that comprise his system, it will be found that this is not at all like the real world, but remains rather an ideal world. Just as the mathematician constructs universes out of ideal dimensions (quantities), so does the metaphysical thinker build for himself a world of ideal characteristics (qualities). This fact is, however, taken into consideration by philosophy—quite in the same way as in mathematics—at a comparatively late hour. As approximately adequate descriptions of worlds ideally qualitative, all great philosophical systems are correct. For this reason those who read through them often feel that each and every system is the right one. Just as it is possible to incorporate the newest relative special quantities proposed by Physicogeometry in an absolute n-dimensional Euclidian space, so also is it possible to include all ideal philosophical systems in that of Hegel.

But this possibility justifies Hegel's optimism about philosophy only in so far as the *correctness* of thought-systems is concerned. Only now do we face the problem: in how far does the real world resemble the ideally qualitative constructions of philosophy? In order to clear up fully this point of resemblance—call it "distant" resemblance—I would have to subject it to a logical examination. Here it may be said

that all the ideal worlds of philosophy resemble the real world only in part; in some respects there is no resemblance, and in other respects no comparison can be made. Consequently only those conclusions which can bear the test of comparison with reality—not merely comparison with idea —are arrived at according to rule, and are correct, pertinent and *true*. You will find some "true" conclusions in every philosophy of importance; but you will also find some which are not "true" and which cannot, therefore, be included in a summary of what philosophy has correctly told us about life.

It follows from what has been said that the author of an attempt to appraise critically the history of philosophy will have to ask himself, as did Justin:

1. If one regards a given teaching as true or false.
2. If one regards a given teaching as not conformable with reality but (ideally) correct.
3. If one regards a given teaching as correct or incorrect.
4. If one regards a given teaching as incorrect but logically in accordance with rule.
5. If one regards a given teaching as in accordance with logical rule or as wholly opposed to rule.

He who applies these tests will avoid an endless embroglio of unnecessary explanations, and will arrive at a fruitful winnowing of truth from philosophic chaff. The second test merits especial attention because it is so often applicable. The correct ideal-world construction, attempted often by philosophy during the early stages of its existence, becomes as time goes on more and more the concern of special sciences which separate themselves from philosophy. Their theories, though correct and made according to rule, are never absolutely conformable with reality but only approxi-

mately conformable. As soon as one realizes this and guards against accepting an explanation as wholly accurate, the danger to truth ceases to exist.

At this point genuine philosophy takes its stand, carrying on the immemorial task of keeping reality free from the clamps of formulæ, and of exploring the changeless universe of being beyond the limits to which specialized learning can go. Philosophy can never be pinned down to any one thing —for instance, the investigation of the methods of natural science. True philosophic thought always leads to the pinnacle of metaphysics. And this is nothing else than the knowing of those substances and attributes in universal reality which are worth knowing. All great thinkers have accepted this definition; and no matter how interesting philosophical side-issues may be, they can never turn the true philosopher aside from his most essential duty or deprive him of his rôle as a master of mankind. Indeed our time is so sick of nothing as of the guesses, the fictions and the psychological theories which have come to substitute for philosophic truth.

We may learn from Tatian, then, that the world's reality and the ideal speculations of metaphysics are not immediately interchangeable; and from Justin that the truth which thought conserves does not go lost, however much the systems of thinking may change. If we read the writings of classical philosophers with open hearts and minds, we find in them ideas which later serve as theories to guide the development of knowledge; poetic visions of the basic realities of existence; and finally—a matter of profound importance—religious convictions which seem to open the way for an understanding of universal mysteries. But of course these things do not remain the exclusive property of the philosophers. Among the great artists, above all among the poets, are to be found men gifted with metaphysical

realization. Then too, the conclusions at which a thinker arrives in solitude alter the convictions of whole generations of mankind, slowly indeed, but with tremendous force. For these reasons an examination of the subject is valuable, though the difficulties which accompany it cannot be whisked away.

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BOOK I: THE ORIGINS OF PHILOSOPHIC THOUGHT

THE ETERNAL MAGNET

CHAPTER I

THE ORIGINS OF PHILOSOPHIC THOUGHT

The question with which all philosophy begins is this: what is unconditionally real Being? In this constantly repeated formula man's unquenchable desire for God finds expression. And already in its earliest mythological poetry the feeble human entity is found seeking after the eternal, powerful Entity that dwells beyond space and time. At first this search is not, of course, inspired by a burning thirst for knowledge. Mysterious fear hunts a refuge in its need—refuge with the Great Father, the Prime Spirit, who needs neither sacrifice nor prayer as these things are understood by the veiled, untutored sentiment of the primitive savage, who uses them to placate shades themselves destitute or to flatter demons fond of mischief and trickery.

The existence of God was not immediately evident to a human consciousness only half awake. Eternal Divinity was nameless to the primitive mind, which sought without having words for its quest, and had as yet not even found a name for the faculties with which it reflected and imagined so much that was illusory. Therefore the self-expression and the cosmic theory of early man [1] were not of the same stature as

[1] The religion and thought of primitive peoples have invited a great deal of speculation and comment. No better book than Le Roy's *Religion of the Primitives* is available in English. Among the more important modern treatises on the subject are Frazer's *The Golden Bough: A Study in Magic and Religion* and Durckheim's *Elementary Forms of the Religious Life,* both of which have been severely criticized.

his deepest experience. They were a kind of drunken, helpless, irrational talk about the Father of the Race. The primitive person answered the questioning wise man with the most reverent symbol he knew—that of a Father—because he could find no terms in which to express the Being who, after all, transcends the speech of even the wisest men. But when he began to talk to himself about the final Object of his hopes, he gathered the melodies of mythological poetry.

The Primitive Cosmos

It is difficult for us to reconstruct the primitive idea of the world. It was a universe yet unformed by thought, in which there were no permanent stuffs (substances) and no firmly welded dependencies in time and space (causality). Someone has not unreasonably called the world of myth a dream taken in earnest. But we must bear in mind that among naïve people of our own time wood is "changed" into smoke and fire by the red flame, and that these in turn pass into "nothing." Solid things break, children say, "all by themselves." The shadows of men and animals "appear" suddenly and then "vanish" again, taking on sometimes a thousand fearful and ominous shapes. Then if we bear in mind how little of what we experience in daily life is fixed firmly and definitely in the memory, we shall see that, even under the most favorable conditions, consciousness awake is not unlike consciousness in dreams.

Early men naturally clung to ideas which helped them to carry on the battle of existence—ideas like that of a clannish community and the strict subjection of children to the will of the father. These two notions implied reverence for elders who dispensed both aid and punishment; and dictated as it was by fear and need of protection, the reverence lingered (in the form of ancestor-worship) beyond the time of the elders' lives. Its deeper significance was not recog-

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nized, however; it was merely a duty in the performance of which all shared. If a dead ancestor appeared in a dream or in the fantastic mists of night, the reality of the apparition was not questioned but was accepted as a proof that the dead one now wielded more power than of old. He could come and go, could make himself invisible or different in appearance. Walls and trees were no barriers to his passage.

In short, the ancestral spirit followed the laws of the imagination. Nothing seemed less marvellous to the primitive mind than a miracle. All finite beings were thought to bear "wonderful" relations one to the other; they could bless or curse, bewitch, or remove spells from one another. Any person especially gifted, in whatever way, was a magician. Because thought was as yet unimportant and the mental image supreme, only finite beings were conceivable and only they were given names. Therefore the human soul, desiring to satisfy its obvious, instinctive desire to enter into communion with the Eternal Spirit, sought a magical fellowship with the powerful ancestral shades. It pictured itself not as something spiritual but as a form seen in a dream or traced by a shadow. If there had been no death or sleep, the primitive man would have identified body and soul; but he was familiar with the stark corpse of one killed, with the ghosts of the departed, with the hunting done in dreams wherein the body had no part.

And so the shades were accepted as powerful. They could bring sickness, or avenge themselves with fevers. Weather and harvests were subject to their control. It was worth while being on good terms with them. But often not even the magician could gain their attention when important issues were at stake. Accordingly it was found necessary to consecrate and consign some object, some single thing (a fetich, an amulet), to the shade, who took possession of it.

If the fetich proved useful, it was honored; if it failed in the hour of need, it was scoffed at and flung aside. To assure a more reliable coöperation with the shade, the magician then constructed an idol which inspired fear. Thus the beginnings of the searching cult and of the art of expression were simultaneous.

Nature Worship

It might happen that the idol would be tortured and burned, by a former worshipper; for the mistaken resentment of the primitive soul was dictated by its need. Once it had given a spiritual character to crudely fashioned images, thus expressing its sense of relationship to Something mightier than itself, this soul mustered the courage to establish a cult of veneration for the great objects of nature—the stars, rain, fire—as agencies which could be helpful, beneficent or dangerous. Magic had given the likeness of man to idols, it had dispensed rain and sunshine; but gradually the natural powers became superior to the idols, for the sun was really in the heavens, commanding reverence by its presence and not slipping stealthily from view like the flitting and often unreliable shades. These powers were serenely above the expectations and threats of men, and could never be made the objects of contempt. Selfish fear of the shades began to give way to awesome recognition of the sublime in nature. The sun and the stars, honored by peoples now more fully awake and ready to undertake enterprises, were really no longer racial gods though their names were racial property.

The deeper the concern of mythical poetry with the varied character and efficaciousness of natural powers became, the more individuality and life did it attribute to the natural gods. Animals were identified with the forces of nature and were thought to be imbued with their being, in a manner

we now have difficulty in fathoming. Totems, used in the earlier stages of myth, reappeared once again in a nobler form to symbolize divine beasts. But gradually animal worship gave way to the growing might of mythical gods in human form; and the process of transition is plainly visible in the many mixed deities created by India and Egypt. Once the gods had assumed the character of man, naturalistic polytheism was at an end. Infirm and limited humanity now entered into relationship with divinities who were *like* man but possessed greater power, nobility and beauty, and who knew not death. Religious yearning was thus enkindled to worship God in human form and to find one's self embosomed in God.

This yearning also was still groping in the dark, remote from reality. While the magicians had tried to pull all the powers of heaven down to earth, the Greek mythical poets gracefully raised humanity to the blue heaven of Olympus. Their gods and the power they possessed were of the earth. Meanwhile art had developed; the temples of worship grew more noble, and the lore of the deities waxed more and more beautiful until it became Homeric. With a deepening recognition of the superiority and sublimity of the gods the tendency to try to use their powers for selfish purposes lessened. Their majesty commenced to ennoble man, to inspire him with loftier aims, while teaching him to see the greatness and the tragic character of his destiny. For polytheistic mythology was thoroughly tragic, whether it found expression in Germanic nature lore or in the Greek cultural tradition. Always the ruling generation of gods was destined to downfall—to Götterdämmerung;—and even the highest deity was helpless, knowing as he did that he was governed by implacable fate. This sense of how the gods were limited brought its consequences. As man extended his sway over the powers of nature, his

respect for the gods identified with them diminished. Prometheus invented fire and thus outwitted the deities, feeling in his rebellion that the punishment inflicted upon him was unjust. Here, as is obvious, ethical consciousness proceeded to criticize the erring divinities.

Little by little mythology faded into a kind of artistically arranged preparation for a philosophical view of life. Man, coming to know himself, gave form to his desires, energies, passions, wisdom and vices. The human soul became interested in observing itself, in giving a personal interpretation to the figures of mythology; and therefore it created means of excitation which would afford deeper glimpses into the depths of the ego—the dionysiac intoxication cult, for instance. But even the art-form in which this curiosity found its mightiest expression—the tragedy of Aeschylus,—could not banish the expression of heavy-hearted, smiling sadness which played about the ambrosia-moistened lips of the mythical immortals.[2] The tragic theater, too, did not yet voice the word of Truth.

The Human Ideal

Perhaps the ethical revolution against the gods of mythology found its most sublime expression in the conduct of the sensitive Egyptian Pharaoh, Amenophis IV.[3] He abjured not only the dull, imposing pomp of the court, but also the entire cult of the gods. He commanded that homage be paid to the one good and mighty god of light, whose son (echn-aton) he professed to be. The glowing disk of the sun was the symbol of this god. Absorbed in the theology of his mythical monotheism, the Pharaoh, in a lofty spirit of sacrifice, surrendered his dignity as a king, and

[2] See page 38.

[3] Amenophis IV reigned for about eighteen years, beginning 1375 B.C.

the reins of government fell from his hands. Human craft and regal splendor could not transmute the small still voice of the original revelation, which lived on under a veil among a mankind led astray by sin and chained to the earth, into the clear, refreshing declaration of the prophet of Israel, which speaks of God as a spirit and a living Being sufficient unto Himself.

Mythology was unable to arrive at a knowledge of Divinity by natural reason. This only philosophy can do; and even it seldom accomplishes the great task satisfactorily. In order to see it at its best, we must take leave of the Elysian mysteries and the Athenian tragedy, of the countries of the Nile and the Euphrates, and turn our attention to the district of the Ganges. There, too, myths appeared in vast number, because of the influence of a tropical poetic imagination. Profound reflection that was bound up with suffering distinguished the story of Krishna, who immerses his divine nature in the forms of numerous men, so that he may gain an intimate knowledge of their sorrows. Indian wisdom was rich with vision and longing, and it understood many an occult occurrence. It was a philosophy of disillusioned pain.

2. The Mystical Wisdom of India [4]

The Indian thinkers were incomparable students of metaphysical philosophy. Their unerring instinct for that which is worth knowing for its own sake led them to despise all

[4] The extremely complex character of "Hinduism" as a general term makes the bibliography dealing with the subject very extensive. The enquiring reader is referred to *Brahmanism and Hinduism, Religious Thought and Life in India,* by Sir Monier Williams (London, 1891), where a distinction is made between traditional, orthodox Brahmanism and the various other cults which have come into being. Other useful works are: Barth, *Religions of India* (London, 1891, third edition) and Mitchell, *Hinduism, Past and Present* (London, 1894).

treasure excepting truth. In their extraordinarily meditative people, so faithful to the past, there lived on the tradition of all polytheistic forms of culture. Skeptical Indian wisdom was not circumscribed enough to deny the existence of demi-gods, but it speculated coolly upon what magical relations might be established with them. The knowledge of Brahma weaned men away from the more darkling paths of thought. And so the Indian became, when he was genuinely mystical, a yearner for contemplation of Divinity and for the soul's welfare. His thought shaped the question which is, as we have seen, the fundamental philosophical question: what is unconditionally real Being?

His awakened spirit found little assistance from the demi-gods created by imagination. The animistic savage believed that the world was as real in his dreams as it was when he looked at it with open eyes; the Indian, however, discovered *the dream-likeness of our conscious life.* His boundless fantasy pictured for the student of wisdom an outer world of inexhaustible richness—a bright, tropic landscape glorious with the things that adorn fairy tales. But then, with purposeful repetition, he added the inevitable cool explanation of reason: all this is illusory, the stuff of dreams. Colors and the singing voice are alike perishable and worthy of contempt. All that stirs our senses is woven together in a gleaming veil which masks the Self-sufficient Reality. The sun, the stars, fire and light, plants and animals,—everything that had been deified by the heathen cults,—cannot be the Changeless Real.

The Brahmanists

Thus did Indian wisdom unmask the world's vanity. Brahmanism [5] proclaimed the nothingness of creatures chained to

[5] Brahmanism is the central, intellectually highly developed stream of Indian thought.

time and space; and, driven on by the perennial desire to know the Ultimate Cause of all being, it completely overlooked the less perfect reality of substances existing in matter. Its idealistic theory of life therefore ran away from the world as well as it despised the world. The Brahmans were appropriately enough contemplative hermits who denied but did not master material being. We must remember, however, that they were not merely theorists but mystical poets gifted with profound insight. The awesomely sublime fragments of the Trimurti [6] do present a symbolic picture of the mystery of the Trinity; the myth which recounts the inspiration of the world was a divination of the mystery of the Divine Word, and the legend of Krishna [7] breathed the idea of the Incarnation and the longing for Redemption. Obviously these poets were not workaday philosophers devoid of religious fervour.

What is Atman?

Religion, too, asked: "What is Atman—i.e., the self-acting, human self?" Things are merely apparitions which hover before the self and are dependent upon it for their ability to appear. That which *is* self, independent of space and always present, while the stream of time rushes past it—this is known to a man alone as his own Ego. You yourself, declared the great doctrine of Indian idealism, are that which is real in everything you see. This "yourself" is not illusion, is not the great multitude of apparitions. I am a self. But as circumstances now are, this "I" is caught in the web of delusion and can neither know a mystical fellowship with a brotherly "You" nor become the active

[6] The Trimurti (Brahma, Vishnu and Siva) constituted the Indian trinity. In art they are represented as one body with three heads.

[7] Krishna is an avatar, or incorporation, of the god Vishnu in human form. He was represented as a beautiful young man.

"World Self." And the eternal "World Self" was, indeed, pronounced unfathomable by the Brahmanism of the Upanishads,[8] with the result that the mysticism of silent, humble contemplative prayer gave way to an effort to teach truth, and to fashion a system of negative theology declaring God inexpressible, sublimely above all attempts at definition.

Generally the Brahmanistic idealism offered a pantheistic solution for the problem of God. "Brahman" was explained as the fundamental, universal world force; it is the "Self" with which the human soul is identical in being. Essentially "I" am Brahman. To this philosophical pantheism the mystical books of the Vedas traced a development from polytheism. A few lofty and exceptional minds, as for instance Yaina-valkya [9] in the Brihadaranyakam, carried the development still further from pantheism to philosophical theism. Here the soul, conversant with itself, stands as a limited "self" face to face with the great "Self"—contemplative and yet sensible, even in its genuine humility, of the kinship between the two. This kinship was expressed also in the interpretation of Brahman as "Tat tvan asi"—"Thou that art." He cannot be denied any more than the "self" of the soul can be denied; for he who negates himself, was the logic, is nevertheless still himself.

In the end the powerful Sankhya school [10] created even an understanding for the relative actuality of the outer world

[8] The Upanishads are those parts of the Vedic books which speculate on the nature of man and the world. These books (the Vedas) are more than a hundred in number, but seem to be based on four metric originals which are therefore called the "four Vedas" in a more restricted sense. These are: the *Rig-Vida,* the *Yajur-Veda,* the *Sama-Veda* and the *Atharva-Veda.*

[9] Yaina-valkya was a Hindu sage who is supposed to have lived and written about 350 A.D.

[10] The Sankhya school, one of the oldest and most distinguished among the six leading schools of Hindu thought, professed to teach the means by which eternal happiness might be attained. It enumerated twenty-five principles of existence, and advocated thoughtful knowledge of these.

created by God. It was conceded that there was more in this world than sensory illusions. Apart from the being of the soul, existence was attributed to things which occupied space and had the quality of motion; that is, substances and bodies. This interest in reality was above all useful in the exploration of the astronomical universe.

Psychological Observation

Side by side with philosophical meditation, psychological observation developed to a remarkable degree in India. Thinkers, the majority of whom knew the outer world only as the product of dreamlike perception, explored with particular penetration the life of dreams, but went beyond that to a study of the conditions of consciousness above and below the level of wakefulness. They described wakefulness as the state of perception, and bright wakefulness as the state of critical reflection. While steeped in a kind of dreamfulness, the Indian student listened to the teaching of his master, who knew how to plunge individuals of the curious populace into a hypnotic sleep. This sleep, which was also cultivated in the temples, plunged the ascetic into a deep-sleep that resembled unconsciousness, so that the soul, stripped of all memory of experience, could fall back upon its untrammelled self. The real masters of concentration, however, lifted themselves to what may be termed a supra-conscious state. In meditation they saw through the illusions of sense, while the remembered visual world passed before them as a picture of their own manufacture. Contemplating, the ascetic turned his gaze inward: passionate desire then ceased to be and only the light of reason flamed, until all this exalted struggle had ended and the "self" of the soul rested in happy peace within its own being. Finally there was a fourth state, that of ecstasy, in which

the soul could rise to mystical union with Brahman and achieve complete forgetfulness of itself.

Many sects of ascetics strove to attain the higher states of consciousness with the aid of heroic penances. Others, the mild Jainas [11] for instance, were concerned rather with seeking peace and goodness as ethical treasures. The school of practice—the Yoga school [12]—whose adherents are frequently designated with the Arabian word "fakir," formulated a thoughtful psychotechnical system of self-control. Choice of location, governance of the body, and breathing exercises constituted the introductory phase; isolation of spirit and quiet meditation then brought about control of thought; and finally intense concentration gave knowledge of men, subjection of material concerns to the concept of self, and at last oneness with the Atman.

Gautama

About five hundred years before the birth of Christ, the princely house of Sakya gave India and the world the self-sacrificing prince Gautama [13] who, deeply troubled by the facts of sickness, old age and death, left wife, child and splendor to overcome a tendency to cruelty and the prejudices of caste by doing penance. The norms of thought included in his teaching were developed out of the Brahman system; his goal was ethical, because he sought not learning but a way to live rightly. His word was a law (dharma)

[11] Jainism was founded by Mahavira, who lived near Benares, in the sixth century B.C. It rivaled Buddhism in popularity, and taught doctrines much the same in character.

[12] The Yoga school is supposed to have been founded by Patanjali. Though it held a complete system of thought, it became renowned chiefly for its practices.

[13] Gautama the Buddha was born in the sixth century B.C., in a town not far from Benares. His long life of eighty years was largely spent, after he had attained to the views which characterize him, in founding monastic orders. See *Buddhism,* by Rhys-Davids.

for all who sought refuge with the Inspired (Buddha). In his person the culture of India, already then over-ripe, cowered sensitively before the thought of suffering. "What must I do in order to escape pain?"—this was the question which Buddha considered basic. He agreed with the Brahmans who interpreted the outer world as essentially a delusion, believing that only the boundless ignorance of man could lead one to entertain a notion of unspiritual being. But, he observed, the delusion is not dispelled by theoretic criticism. Other means must be found to arouse man from his nightmare; for the dream of life chastises, is wholly painful. Birth begins with tears and death ends in the midst of tears. A man is hardly born when already he begins to die. All the deeds of a lifetime have for their purpose only the preservation of an existence heavy with suffering; all effort creates new need. All happiness is accidental and constantly in danger; yes, it is happiness only to those who forget how much suffering offsets it. The nightmare will not be dispelled by knowledge, so long as self-will is greedily thirsty for life and pleasure. What matters is to overcome the power (karma) of self-will, and to break the bonds which attach man to the worthless world. Our selfish nature enshackles us. False observation mistakes the outer world for reality; false memory clings to frivolous past joy; false sensation fastens itself to pleasure; false thinking is directed to worthless goals; false volition derives new will-power from these sources; false credulousness mistakes imposture for truth; false actions enmesh man irretrievably in the world's net.

Those who would escape from these eight fetters were bidden to follow an eight-fold noble road of redemption. For knowledge about the "World-Self" would be of no avail. To *know* whether there be gods could not alleviate human misery; and what help could be derived from affirming the

"self" of the soul? While that soul is chained to its fetters, it is without power to assert its selfhood. Therefore Buddha recommended, first of all, these paths to self-redemption: turning aside from the alluring outer world, temperance, friendliness, kindliness, sympathy for all living creatures, mildness, charity and cheerful renouncement. To liberate all living things from suffering—this was, he felt, the intention which men should share with one another. But the Buddhist, having arrived at knowledge of the nature of pain, was not content to rest there. The flame of his spiritual existence, he knew, was fed by the oil of self-will; in longing for the things of the world, one constantly poured new power—"karma"—into the lamp of life. Some of this "karma" could be poured into new lamps should any single vessel of the body break into pieces, or it could enkindle other flames. And so the misery would continue to exist. Therefore it had to be one's greatest care to prevent the accession of new "karma," so that the flame of one's individual existence might burn out during the lifetime of one's life-lamp, leaving no spark to fire new suffering. We must observe that according to this Asiatic doctrine it is not the soul which migrates, but that new souls are kindled by old deeds. Therefore the desire to "do" must be completely uprooted by living in the patched yellow garments of mendicant monks and practising the monastic virtues of poverty, chastity and obedience. Dwelling apart from the world in meditation and alms-collecting, the Buddhist monks went about doing good. The teaching of Buddha concerning sympathy and sacrifice is the most valuable ethical doctrine offered by the Orient. It proved that the uncorrupted human conscience is sensitively aware of the highest moral values. Other teachings followed by disciples. The system of Sakyamungi is in itself remarkably logical. Many of the theoretical arguments it proposed must be considered the ori-

gins of skeptical objections against the possibility of knowledge. They recur constantly in the cultural history of reflective mankind; and we are indebted to them for the proof that many stubborn errors can be combated most successfully by skeptical methods. The more earnestly and open-mindedly one evaluates them, the more clearly one sees the extent of their power and the limitations of their effectiveness.

The Quality of Buddhism

Broadly speaking, nobody who concedes the premises upon which Buddhism rests can say anything effective against it. Those who would, at all costs, be liberated from suffering, can perform no more logical course than to seek refuge in the "dharma" of Buddha. And if one believes that man's earthly existence is his be-all and end-all, one cannot honestly deny that the Indian prince has told the truth about the character of human life. If there were only as much metaphysical reality as Buddha says there is, then also his road of redemption would be the only possible one. But is the wish not to suffer further the most worthy of all desires? Pain is a portion of the deep foundation of man; it is linked up with his initial surrender to a worthless world. That is the great sin of his being, and from it he suffers. Grant this truth, and we see the significance of the Buddhist idea of the dark heritage of the cause of suffering.

It surely is, however, a greater achievement to redeem mankind from this sin than to remove pain, the consequence of sin. Only so could redemption in its most profound sense be completed; for all that the flight from pain can promise is peace in the extinction ("nirvana") of the nightmare of the world. Such flight is a turning aside from the world, to be sure, but it is in no wise a victory over the world. The tired wisdom of Asia frees the power of the will only to

escape from the burden of personality; and so that will does not become sufficiently mature and strong to ask: "What is it that I may suffer?"

We marvel at the energy with which Asia developed its philosophy of disillusionment during centuries of desperate effort. On all sides it kindled illuminating sparks of truth from myth, religious fervour and ascetic living. Nowadays a tired Western world believes the wisdom of Asia superior to its own. We shall see, as we proceed, that once the point were conceded Europe would have proved itself incapable of guarding the fire of a purer truth. It is often suggested, by way of argument, that the West has never convinced India. That is simply the fault of Western nations. So long as Europe throws the Indian before its cannon, what can India do but—despise it?

3. The Beginnings of Greek Philosophy [14]

Approximately at the same time that India was on the verge of giving mankind, in Buddhism, the oldest of the universal religions (or, more precisely, at the time when the sect of Jaina undertook to simplify Brahman teaching), Greek thinkers also commenced asking what there was in the world which could be called essentially real. In all languages philosophical need puts the same fundamental question; to the Indian it was the "atman," to the Greek the ἔντως ὄν (that which has being after the manner of being); and to the present it is "the intrinsically real." But in their answers to this inquiry East and West were very widely separated. What was so remote from the Hindu's vision as the abundance of the material world? All of

[14] The period dealt with in this section begins, roughly speaking, with the sixth century B.C. Among books which discuss the data and mooted problems of pre-Socratic thought, the following may be named: Zeller, *Pre-Socratic Philosophy;* Windelband, ***History of Ancient Philosophy;*** and Benn's *The Greek Philosophers.*

it seemed to him the stuff of dreams, never intrinsically real. But the shrewd citizen of Ionia had a different point of view. Acquainted with the sea, commerce and the homely worldliness of Egyptian practical philosophy, he was interested not so much in the secluded soul as in the blue and bright outer world. Somewhere out there he hoped to find what is *real.*

Thales the Ionian

If we can believe an ancient historian, Thales,[15] the only scientific investigator among the seven wise men of Greece, seems to have demonstrated to his astonished fellow Ionians that a philosopher can know something about real life by means of a canny business deal. He proved the soundness of his mind in the only way that the majority of men can even yet be convinced of such a matter—by carrying on a successful banking business. And because parasols were unnecessary under the pleasant sky of Hellas, Thales as a student of nature welcomed rain as part of the journey by which the beloved sea came back again from the strange cold regions of the air to its azure native haunt that delighted the eyes of the citizens of Miletus through the open windows of their houses. What could be more natural than that he should have declared all things to be made out of water?

Before smiling at Thales' simplicity, one should recall that since his time natural science has been much concerned with the problem of what is the substance from which all things arise. He dealt, therefore, with a fundamental query which no thinker can circumvent. Those who attribute im-

[15] From the meager information we possess about Thales, we may conclude that he lived from 620 B.C. to 546 B.C., that he was a citizen of Miletus, and that he possessed considerable scientific lore acquired among the Phenecians and the Egyptians. Herodotus, the historian, mentions him, and there is an account of him in Aristotle's *Metaphysics.* See Fairbanks, *The First Philosophers of Greece.*

portance to the formation of exact definitions serviceable to research will also praise Thales because he noticed that evaporation and condensation are natural phenomena which change the features of the earth's countenance. It is true that the phenomena which he believed sufficient for a description of the world are adequate only for a partial explanation of cosmic relationships; but this relative inadequacy is, as we shall see, always the fate of every worldly-wise philosophical explanation. This conceded, the services of Thales to physics merit high praise. In the second part of *Faust*, Goethe attributed the concept of sediment to Thales and so made him the forefather of geologists.

We should, however, judge the work of such a man as Thales incorrectly if we considered it either a thesis resulting from cautious observation or a generalization carefully arrived at. Views of life such as his do not appear and prosper apart from a strong poetic urge. Perhaps the awe which overwhelmed the Miletan when he imagined that hills were piled up by the incessant downpour of chalky rain from the sea will be understandable if we compare it with the impression which is made upon a modern man who finds upon a narrow mountain peak the counterpart of the same muscle which some days previous had brushed his skin at a bathing beach. Such a man can feel his way into Thales' legendary concept of the universe, where the air and the earth are both products of expanding and contracting water.

In the final analysis, however, this antique sense of wonder and desire to know the universal mysteries sprang from a motive deeper than curiosity. The cry of creation for the peace of Divinity, which surpasses reason, is echoed very feebly in the beginnings of philosophical speculation—quite as feebly as it had been in the first groping toward truth undertaken by the most savage of primitive barbarians. The

water out of which he fancied all things had been made, was called by Thales θειον or divine. But it was only, as it were, a grandiose philosophical fetich. At the cradle of science, where all wisdom is still remote, the natural philosopher and the natural man alike mistake an illusory symbol for the object of their earnest search.

Anaximander

As the tradition established by the earliest Greek thinkers and students of nature ripened, original masters appeared. Anaximander [16] was the most important philosopher to come out of the Miletan school of Thales. His visionary mind considered the "divine first substance" moving and formative by reason of a life inherent in it; and he was therefore called a hylozoist. The growth of organic life-forms interested his attentive imagination more than the changes which occur in inorganic things. Pulsating life, he thought, rose from the dark bosom of the immeasurable sea and expressed itself in a myriad fish-like forms; at last some creature ventured to attempt an amphibious existence on the land. Then evolution ceaselessly perfected the animal bodies until the shape of man had been attained. When homesickness and fear steal over the human spirit of evenings as the sharp salt air rushes across the warm beach, it is because—says Anaximander—man senses his origin in the sea.

In the work of this thinker we find the first attempt to explain the genesis of life by the theory of development. This creates a kind of nature philosophy that can give a remarkably apt account of a great variety of facts bear-

[16] Anaximander is said to have been born about 610 B.C. He is mentioned by various ancient writers, particularly Theophrastus, and survived as a prose writer in two fragments stating philosophic maxims. Aristotle deals with him in the *Metaphysics* and the *Physics*. See Fairbanks (*op. cit.*) and Zeller's *Pre-Socratic Philosophy*.

ing upon life without, however, making them fully understandable. Anaximander, therefore, has as much meaning for the philosopher as for the special scientist. His sharpened wits find that the sea is too rich a mixture ever to be the first substance from which all things come. What the observer notes, he says, are always things already formed *from* the first substance, which itself reveals no quality all its own. What matter is in itself we cannot say for certain, though we are justified in declaring that it fills boundless space. Therefore Anaximander calls the first substance the Dark, the Undefined, the Boundless, the Formless—τό ἄπειρον. He thus describes the whole illimitable world and the vitalizing activity of nature with negative terms. For him also τό ἄπειρον is divine. Indeed the religious fervour of his philosophical pantheism opened the eyes of Anaximander to what lay beyond the boundaries of the comfortable Hellenic cosmos.

Anaximenes

The idea of a world without limits stirred Hellenic thought with the force of a dionysaic exaltation, and encouraged the formation of a pantheistic philosophy. This effect is normal in the beginnings of movements of thought. Always and everywhere the power of truth reveals the limitations of a philosophical nature cult, though the logical explanation of these limitations may not lie ready at hand. For his part, however, the third wise man of Miletus, Anaximenes,[17] defined the τό ἄπειρον of his master Anaximander as air. "Just as our soul, being air, holds us together" he said, "so do breath and air encompass the world." This weak attempt must be construed as the result of powerlessness to sustain thought about the mystery of "first sub-

[17] Anaximenes died about 528 B.C. He is discussed by Theophrastus and other ancients.

stance"; and one has only to compare it with the teaching of Anaximander to discover the latter's greatness.

Parmenides of Elea

During the course of discussions about being as that exists over and above separate substances, the Greek mind came to discover in a number of ways the function of thought. Parmenides of Elea [18] was reflecting upon how one can arrive at knowledge when he explicitly declared that observation through the senses was unable to grasp the nature of primal being. His attention passed from life and its forms to the problem of reason and perception. The first substance, he said, is not bright or loud, not sweet-smelling or palatable, not warm or cold; what it is neither eye nor ear can tell. Parmenides desired to build wisdom solely upon the mighty power of reason.

The Roots of Idealism

Here lie the roots of European idealism, and here is the source of its achievements and dangers. Once it was understood that every mental image which flashes through the mind needs explanation and association with other impressions, the naïve primitive view of life could no longer survive. Men ceased to believe that the earth was a nourishing disc resting on the floods of Oceanos, domed over by the blue sky. But youthful emancipated intelligence fell a victim to its own pride. The power of reason was considered sufficient for attaining to a correct view of the universe. Observation of facts was hastily discountenanced as misleading. The bright and bustling world seemed to Parmenides nothing more than a vain and truthless show; he

[18] Parmenides was born about 540 B.C. His remarkable philosophical poem is divided into three parts: an introduction, a journey towards truth, and a theory of cosmic origins. See Zeller (*op. cit.*).

asserted that those who described its changes were talking about that which is really—nothing. As a poet he sang of the thousand flitting shapes fashioned by the mingling of bright warmth with dark cold, realizing, however, that these hexameters were devoted to the deluded dreams of such men as had succumbed to error. Unstable, constantly changing sense images could not quench his desire for knowledge. Only that is worth knowing, he felt, which is changeless and fixed, beautifully formed and motionless, eternal and established. What can properly be demanded of ideas, that Parmenides also wished to attach to the *objects* of ideas. The flawless and abiding idea of being was to him the genuine thought, the "Noema." And so the youthful Eleatic philosophy lay in the thrall of its acting reason, seeking new fields for that to explore. Yes, it had now mastered the most universal of all ideas—the abstract idea of being. There *is* being. Parmenides never tired of repeating this fact. Being has no color or other sensory attributes; it remains that which is thought—it is the primal thought, in fact.

Hidden in these judgments is the basic, always recurrent error of all idealism. Parmenides, constructing an idealistic view of the world, forgot that it needed comparison with reality. Because an idea is very well defined, it does not follow that its object actually exists. If there is "being," then that which has here been thought correctly is nevertheless not merely a "thought" but rather the object of a correct and adequate thought. Yes, even the *ideal object* of a thought is, though thought out, not itself a "thought" but "a thing of thought," called by the Greeks an "idea." Parmenides himself poetically describes primal being as a homogeneous and perfectly rounded cosmic sphere. This is an "idea" which is as yet infinitely remote from reality; in fact, it is almost the image of a poet who has gazed too

long at the softly rounded blue sky. Parmenides, in religious awe, called his world God. His idealistic pantheism did not yet distinguish the all-embracing notion of the real world of being from the idea of the most perfect and valuable Reality—God. Therefore the Eleatic school confused expressions which apply to primal being with those which apply exclusively to Divinity.

Zeno of Elea

The objections which normal human common sense urged against the Eleatic school on the ground that movement and change do take place in the universe created a need for a subtle system of argumentative defense. Zeno [19] played with great distinction the truly Greek game of logical sham-battling. Since magnitude permits of infinite division, nothing that moves, he said, can arrive at its goal because, no matter how many intermediate points it may arrive at, the number of those still remaining to be attained must be constantly infinite. The whistling arrow is really at rest, and Achilles could not overtake the turtle with which he agreed to race. The senses, Zeno concluded, create a mental image which is contrary to thought, and which therefore, cannot exist. Now we see that the confusion of boundary points with intervening spaces, upon which Zeno's argument rests, was first cleared up by modern mathematics. But no matter how ingenious they may be, "proofs" which deny a fact testified to by observation instead of explaining it must be called philosophical feebleness of mind—at least when they profess to be more than logical exercises.[20]

[19] Zeno was born about 490 B.C., and on the testimony of Plato was the favorite disciple of Parmenides. His works are lost, and what we know of his teaching is derived from the treatises of later philosophers. See Fairbanks (*op. cit.*).

[20] See Aristotle's *Physics*.

Heraclitus of Ephesus

The ancients found the works of Heraclitus,[21] the curt and lonely Ephesian thinker, dark; and the reason was probably that Heraclitus combined in his person all the peculiar gifts of a born philosopher. His speculation was directed uncompromisingly to that which is worth knowing, but it did not relapse—as did the scholarship of Elea—into fierce and stubborn resistance to observed facts. He could observe what was going on in the world with remarkable precision, and so dispel hasty impressions which had grown out of insufficient attention to actual phenomena. On the other hand, he was not content with provisional generalizations about things, but he sought and found the most generic concept, the most comprehensive judgment, for the greatest possible number of instances. Therefore his thought has been of great service to the special sciences. Human perception visualizes daily a host of definitely outlined things; and for practical reasons we overlook many slight changes, deteriorations or improvements, and continue to regard each thing as one and the same from day to day as long as that is possible. The eye of Heraclitus was, however, proof against such illusion. He noticed the effect of corrosion on stone, and observed that the sea here tore away a portion of the coast and there extended the shore-line. When a thing endures, he said, it is because a balance is preserved between growth and decay, addition and subtraction. In particular, he noticed that the bodies of organic beings remain the same through all daily change because assimilation offsets decadence.

[21] Heraclitus, surnamed the Obscure, was born at Ephesus about 531 B.C. Fragments of his work have been preserved, but for the most part our knowledge of his teachings is derived from later Greek writers like Plato and Aristotle. No early philosopher has raised so many questions or started so many hares. See Burnet, *Early Greek Philosophy.*

Thus a most important discovery was made. What Heraclitus observed in detail—this, all of it, coalesced into his great philosophic poem about the meaning of the universe. This tells us it is impossible to conceive of rigid and unchanging "being," and that the omnipresent law is rather "becoming" and "disappearing." The great All is like a smouldering fire, the flames of which burst upward and in doing so consume themselves. The stream of life flows ceaselessly on, but the same wave never comes back again. Heraclitus does not think of fire as the first substance, in the way in which Thales thought of water. Fire is merely a symbol for the idea of "becoming." This "becoming," however, changes every quality into its opposite—warm into cold, love into hate, life into death. A thing which disappears is replaced by another thing wholly contrary in character. And yet it is this constant endangering of life which arouses resistance, so that out of death there comes new and different life. The corpse of the plant is the provender of the beast. There is nothing more certain than the battle for existence.

Such a view of life necessarily ended—quite as did the Indian philosophy—in pessimism. But it was precisely from this darksome conclusion that Heraclitus derived strength. For he realized that the emancipated reason of the wise man would observe not only the struggle which creates life, but also the *order* which exists in the ebb and flow of the world. These, he felt, are subject to a strict law which compels their action. To man, however, it has been given to obey noble traditional rules in a spirit of voluntary submission, and to observe the laws of the state as he sees fit. Reason perceives order and the laws of life but also gives men and their communities such codes as are necessary. It is not "being" which stands fast through

continuously renewed "becoming"; it is rather the law of "becoming" that endures.

And so Heraclitus' aristocratic reverence for the law was the result of religious feeling. Like Fichte in a later age,[22] the Greek seer called the order of the world divine. But, if our thought is as incisive and our observation as careful as his, we shall recognize the truth that there are facts which cannot be dismissed as mere "Becoming." The irreconcilable opposition between the ideal constructions of Heraclitus and Parmenides forces a philosophical mind to conclude that both were narrower than reality and therefore proved inadequate. But they are immediately serviceable to science if one accepts neither as an exact account of what the world is, but simply as correct each in its own fashion, by reason of the separate aspects of universal reality which each accounts for.

Conflicts

A just evaluation of the spiritual achievement of classical Greece, which forged the armour of European science and discovered the general concepts upon which it is based, brings with it an understanding of how there could be, at times, a sharp division between the different activities of philosophy. Observers of nature, for instance, extended the scope of prevailing abstract conceptions of the world and brought them nearer to reality. Tragic poets created works of art which often expressed metaphysical ideas of great value. Sometimes also religious experience was subjected to criticism. This division of labor was not, however, anything like modern specialization. The individual thinker followed his natural bent without sacrificing all speculative daring.

[22] See page 398.

Empedocles

Empedocles [23] was chiefly interested in the events of the physical universe. The patent fact of movement made so deep an impression upon him that he did not try, like Parmenides, to explain it away. He noticed, however, that change moves in a cycle. The stones which crumble do not disappear, even though the entire cliff of which they were a part is worn away; the wave which moves out of sight does not vanish. Heraclitus, said Empedocles, was right when he declared that things come into being and dissolve again; but this restlessness "becoming" might be interpreted plausibly as a transmutation of elements. Thus he unearthed another permanently valuable general idea. The task he proposed was to discover again in the elements that which Parmenides had called "being." This, despite all its claims of permanence, Heraclitus had blown into dust; and Empedocles sought to trace the roads which these little particles of dust had taken. Out of the number of changes which he saw affecting things, he emphasized freezing and thawing, evaporation and condensation, and finally combustion. During these processes, he said, a fundamental element frees itself from the mixture of elements. That which is solid separates from that which is liquid; liquid in turn parts from the air, and so on. Solid earth, liquid water, air, and fire are therefore the primal elements, from the stratification and commingling of which all things that are arise.

Empedocles' system was still very much indebted to Parmenides—e. g., conditions were represented as being—but

[23] Empedocles was born at Agrigentum, in Sicily, about 490 B.C. Some 450 lines from his philosophical poems have been preserved and are notable for imagery. He seems to have been a traveling lecturer; but the legend of his suicide by plunging into the crater of Mt. Etna (see Robert Browning's poem) is unfounded. See Zeller (*op. cit.*).

its approach toward reality was unmistakable. A far greater number of facts which nobody can doubt may be understood with the help of Empedocles than can be explained with the help of Parmenides. (1) Physics gained the concept of composite substances, even though this gain was inevitably detrimental to poetry. Empedocles did not attribute an innate vitality to the elements, as Thales did to his "first substance," but viewed them as in themselves dead and devoid of motion. They change, he declared, only when some cause is present, and so are passive. (2) In his investigation of causes, Empedocles formulated another fundamental concept of physics—that of power. He applied the poetic similes of "love" and "hate" to what we should more prosaically term attraction and repulsion; but really these words of ours are also figurative, as we see when we attempt to define them strictly. (3) With his declaration about the cause of movement, Empedocles stirred up a problem which has since then continuously made the philosopher hold his breath. He himself called "love" and "hate" the gods who move the world. But his view indicates clearly that rationalism was setting in, that religious fervour would be dissipated, that the earnestness of the quest for God would become less serious. Men would no longer speak of the gods in tones of faith, but would use terms of poetic allegory. The most absorbing interest would soon be the description of observed facts, not the knowledge of the Final Reality of the world. The gods would gradually become hypotheses, and the powers of nature the idols of a circumscribed wisdom. We may conclude that although the narrowing of the zeal for discovery to a restricted area is unavoidable, the moment one interchanges a special aspect of reality with all of reality, one falls a victim to most deplorable philosophical self-robbery.

Anaxagoras

Anaxagoras [24] was a physicist who improved the hypotheses of natural science which had already been constructed by others. He considered that the effort to restrict the number of elements to four was arbitrary, and divined the complexity of what Empedocles had said were first substances. How many of these exist, he declared, could be determined only by thoroughgoing scientific experience. It seemed to him that it was also erroneous to assume a single first substance, because the changing variety of things men see can be accounted for only on the basis that there has been a commingling of substances different in character. No thing can be mixed with itself. Indeed, the nice organization of complex things suggests that they are the result of a commingling, the basic contents of which baffle the attempted analyses of thought. The persistent "being" therefore, is in practice a matter of very small parts of varying quality. These would, however, reveal themselves as individual in character, if only one could examine into them closely enough. And so we could know of being only the individualized forms it assumes, and a generalized knowledge of nature would be impossible, were it not for the fact that a remarkable order rules everywhere in the world.

The Hellenic spirit was, in the person of Anaxagoras, impressed with the sublime simplicity and coördination of the stellar universe in contrast to the inextricable tangle of earthly existence; and it seemed to it impossible that all this harmony could have come into being of its own accord.

[24] Anaxagoras was born at Clazomenae about 500 B.C. He lived during many years in Athens, was the friend of Pericles, and is said to have been the teacher of the dramatist Euripides. Some years before his death in 430 B.C., he was accused of impiety, but escaped from prison and went into exile. Fragments of his work have been recovered and published. See Burnet (*op. cit.*).

So much evidence of design in the heavens and in the bodies of living creatures impelled Anaxagoras, the student of nature, to conclude that there was a governing intelligence (Noῦs) which operated according to a plan. This Intelligence he described as a self-ruled, active life-force, and thereby made himself the first vitalist in the history of natural science. The Noῦs, he declared, fills the world as its soul or motive power; but he remained, as a physicist, so deeply interested in the exploration of material substances that he qualified his definition of the World Intelligence by calling it a highly rarified "thought-substance." Hand in hand with this sacrifice of metaphysical sensitiveness there went the loss of insight into the images created by religious desire. These last meant little to Anaxagoras, as may be seen from his rationalistic declaration that the sun is not a deity driving a wagon, but a mass of flaming stone. He discarded Apollo; and we may understand him best possibly if we remember what Apollo meant to Aeschylus the tragedian.[25]

4. Pythagorean Philosophy and the Materialism of Democritos

The hypotheses of Anaxagoras, though they were developed reflectively to account for carefully observed phenomena, could not suffice either as the basis of a method in natural science or as the groundwork of a great philosophical system. The qualitatively established divisions of being were not easily (or sufficiently) subject to measurement. It was only after mathematics had dealt with the effects of movement that the explorations of physical nature brought adequate results. Then, in so far as time and space were concerned, general formulæ defined what were apparently differentiated occurrences, with an accuracy that was satisfactory in practice.

[25] See page 38.

The Pythagorean School

A very promising beginning in mathematical study was made by the Pythagorean School, said to have been established by Pythagoras,[26] who lived in Samos during the early seventh century. Much legend grew up around this group. But even after one has discarded everything which the late-Hellenic imagination generously attributed to the Pythagoreans, their services on behalf of mathematics, the theory of music, and the philosophy of numbers remain. Without realizing the benefit they were conferring on surveyors, they determined the character of the right-angled triangle. They discovered the relation between musical pitch and the rate of vibration producing tone, and they invented a system for the notation of intervals. They formulated the concept of harmony. More ambitiously, they sought to arrive at general judgments about the real world by grasping the relations between numbers, not by dealing with qualitative characteristics of first substances. Thereby they fashioned the most noteworthy of the practical instruments of natural science. The greatness of this service is not lessened by the fact that many Pythagorean teachings were wildly imaginary. Without the aid of these mythical fancies they would not have discovered the far-reaching applications of their acoustic discoveries. They listened to the ceaseless trembling and rhythm of all little and mighty movement in the universe; and when they saw that the movement of their musical instruments was governed by the same law as that

[26] Of Pythagoras himself little is known excepting that he removed from his native city of Samos to Crotona—or, in terms of larger geographical units, from Ionia to Greece proper. Very likely the "school" he founded and which attracted disciples in many places was fundamentally religious in character. But Pythagoras himself is conceded by almost all historians to have been something of a philosopher and to have professed a form of dualism. See Wilhelm Windelband, *History of Ancient Philosophy.*

which had been set for the stars, they felt that they were overhearing, in their reverential meditation, the harmony of the spheres. Thereafter they sought to arrive at concord in all things. Their lives were to be regulated in clear, simple, coördinated, harmonious fashion. Indeed their School became finally a religious and ethical union, separate from the noise and disarray of the world around about; but its scientific influence was felt by many outside groups and individuals.[27]

Democritos

The confidence which the early Greek thinkers felt in the ability of philosophical reflection to learn the nature of primal being was retained by Democritos,[28] creator of the classical system of materialism. Before his time no one had investigated any farther than was necessary for the guidance of nature students what part in the acquisition of knowledge is played by the thinking soul, and what falsifications of the mental image man makes of the world are produced by the inevitable individuality of each person's perception. Of course, the senses had been viewed with suspicion. Democritos did not, it is true, add anything new to the achievements of his predecessors. But with far-sighted prudence and insight he gathered their partial explanations of reality into a system impressive in its simplicity.

First of all he threw light on those fundamental laws of investigation which have proved their value in natural science

[27] It should be remembered that "Pythagoreanism" was never an organization governed by a commonly accepted code of doctrine. Perhaps the movement can be characterized as "inventive philosophy."

[28] Democritos was born at Abdera, in Thrace, about 460 B.C., and lived to a ripe old age. He is said to have traveled widely, to have lived in Egypt during seven years, and to have written 72 works on physics, ethics and other subjects. Of these only a few fragments are extant. See Gomperz, *Greek Thinkers,* vol. 1.

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to this day. The basic facts of observation, he said, are the given, irrefutable, always verifiable appearances of sensory qualities—colors, sounds, odors, etc. These "phenomena" it is the first task of science to describe. It can be done most simply and with the greatest degree of accuracy if one superimposes the phenomena upon definite assumptions concerning the reality of matter. These assumptions, however, must always be tested by the results of observation. In no case must a declaration be at variance with a verifiable and duly observed fact. Phenomena must abide unchanged through all hypotheses. This is the rule of διασῴζειν τὰ φαινόμενα called by the Latins *salvare apparentia.* Our judgments are valuable only when they are substantiated by the observed facts.

In this way, Democritos believed, the efficacy of the senses was guaranteed. Nevertheless, since one cannot measure quality, the phenomena of quality which are revealed by the senses must be excluded from a scientific view of the world. Our description of reality becomes scientific only when it deals with *quantitative* elements, the relative correctness of which can be tested. Therefore one may ascribe to actual being two characteristics in particular, which can be measured—form and movement. If one knows the quantity of these, one can estimate in a general way the change that takes place in a given phenomenon. Democritos erected his declarations about world reality squarely on these principles. First substance is material stuff which occupies space, is of completely unchangeable form and is therefore impermeable. This stuff is in motion. Everything that "happens" is movement of matter, and particularly change of position in matter. Consequently, in order to permit the vast differentiation of growth and decay, this matter must be divided into exceedingly small particles. These particles are indestructible, concluded Democritos—like the "being" of Parmenides—

and between them is measurable not-being, which is simply empty space. Therefore the particles may be called atoms.[29] In this idea the more modern distinction between molecules and atoms was hidden. The materialism of Democritos regarded every change in actuality as a movement of particles, including also the changes which we today call chemical. If the direction of movement alters, he said, the cause must be attributed to a collision of corpuscles.

The teachings of Democritos concerning the structure of matter have rendered practical service to the science of mechanics during hundreds of years. Our present era sees, however, that his hypothesis is an *approximation* to reality that needs further clarification—a discovery which the philosophical criticism of Aristotle had also made. Unfortunately we have no detailed record of the explanations of Democritos. To him the great cosmic movements were something like cyclic whirlwinds.

So far the system of materialism is comparable to, sufficiently similar to, a portion of world-reality. For this reason, we must concede its lasting importance. But to other portions Democritos' theory does not conform. As long as investigation is content to describe the material world—as long as it consciously restricts itself to this task—it can use with profit the ideas of the great Abderite. The object then is to describe nothing but the physical world. But the materialist's conclusion is utterly false when it declares: there is *only* a physical world; nothing exists excepting what can be accounted for on the basis of my theory. And this is what Democritos averred. Many phenomena force themselves upon consciousness which he could not account for.

[29] It should be noted that the word "atom" originally meant "that which is cut off from everything else," or "that which is indivisible." It is now thought of as a constituent part of a molecule, which is "the smallest part of a substance that can exist separately and still retain its composition and properties."

These are facts of life and of living. In so far as life was concerned, Anaxagoras had recognized the difference. In living bodies there are at least corpuscular movements, the measure of which one can take (even if one cannot assume that the causality of their change is wholly mechanical, they being governed by a purpose). Spiritual experiences, however, have no direct connection in space, as one may learn from changes of disposition. Nevertheless the materialist, in order to be logical, is driven to affirm that experiences are movements. Here his hypothesis becomes so unlike the phenomena that the explanation is devoid of meaning. The basic error is not removed by terming the spiritual change a nerve vibration instead of, as Democritos does, an oscillation of "fire-atoms." A similar error is manifest in the Abderite's theory of knowledge.

From things—that is, from combinations of atoms—pictures are given off, he says, which are received by the sense organs. Then these pictures stir the soul-atoms vigorously to passion and desire—temperately to clear vision of the things, and gently to reflection about the reality that is. This theory of pictures has been vigorously satirized, but it does bear some affinity to the movement of light waves and their reflection upon the iris. From the standpoint of physics, therefore, the declaration of Democritos has much to recommend it. What he had to say about spiritual experiences is, however, wholly devoid of meaning. The fact that a picture of a "thing" is thrown upon the retina is no explanation of the circumstance that it is *seen*, any more than it is the cause of the "thing" itself. The movements of "fire-atoms" (whether in optic nerves or in the optic brain center) are not in any way like object-pictures, nor "are" they experiences. This interpretation has nothing in common with the findings of actual life. How skimpy the declarations of materialism on the subject of spiritual ex-

perience are come home soon to the materialist himself; and so he attempts to deprive, with negatory criticism, this experience of its worth, in order that his interpretation may be trusted. This criticism, teaching the mortality of the soul, the absence of free will and the non-existence of the gods comprises, as a kind of scientific rationalism, a great part of Democritos' philosophy. Its value in cultural history is due to its effectiveness in helping to destroy magical superstition. In the mechanical world which it created, the wise man could only surrender to inevitable fate and attain the silent happiness of knowledge. Thus lived and taught Democritos, a man of great personal nobility and amiableness of character, who is imitated in these respects by other theoretic materialists.

5. The Refining of the Concept of the Gods and Greek Rationalism

The gods of Homer were beautiful, being nobler of form than the statues of Phidias, and more venerable than the heroes of Greece. In so far as they were these things they may have been idealizations of man.[30] But the Homeric epics also ascribe to the gods characteristics which man would never find in his ideal concept of himself. The anger of Poseidon destroys passionately and without reflection; the jealousy of Hero seeks mean and ignoble forms of torture. These traits of character have been borrowed from the powers of nature and conferred upon the deities. Zeus, as

[30] At this stage of religious elevation, appearances seem to favor that modern theory which holds that gods are the creation of men who have been ennobled by their desire for nobility. But this form of self-expression would have no definite bearing upon the reality of the Divine. For it is also true that if man is the creature and likeness of God, he will raise himself on the wings of desire so that he may be near perfection and may grow more noble. And so when humanity writes poetry about the Deity, there is no reason for concluding that the Deity is poetry.

the parent power of the natural universe, is therefore involved in those manifold adventures which the Greek mythos relates with charm and perfect candor. The poet spoke without intuitive reflection about the mysteries of nature, not about the ethical perfection of the gods.

Philosophy and Poetry

When philosophical reflection set in, therefore, two roads were at its disposal. In the manner of Indian philosophy, one could interpret the polytheistic gods as paltry demons, above whom the Wise One could rise so far that he was proof against their wiles. Or one might, in the fashion of the Greek Xenophanes,[31] grow angry with the poets of mythology, who did not reprove the deities for crimes like adultery and debauch, but praised them rather. The modern time, which has long since grown accustomed to reading and loving Homeric poetry for its beauty, is likely enough to accuse Xenophanes of philistinism or prudery; and in so doing it fails to recognize the historical necessity for the struggle between art and philosophy. For poetry gained rather than lost in charm (even while being stripped of its sacredness) when philosophy deprived the Olympian gods of sacrifices offered in their name. Xenophanes battled against Homer, because his ripe thought ascribed to Divinity essential superiority to finite human nature—that superiority which is holiness. To him this Divinity was the "one-in-all." But, as was the case with the first masters of Indian and Greek philosophy, he confused the ideas of God and world. His teaching, therefore, was ethical pantheism.

When once the world of polytheism had clearly discerned

[31] Xenophanes, who was born in Asia Minor about 570 B.C., attacked the poets and some other philosophers in his *Satires*. He is usually referred to as the founder of the "Eleatic school" of thought, so called from the city of Elea. We are informed that Xenophanes himself couched his doctrines in poetic form.

that the measure of Divinity is holiness, then it soon asked who among the gods might be termed holy. Many of the Olympian figures were cast out as unhallowed, and the others grew pale. Their commanding names became confused one with the other, and finally signified, each in its own way, the just, holy and wise God. Then the purified ethical consciousness reverenced mostly the Apollo of tragic poetry, who thus resembled Atman of the Egyptian Amenophis. Nobody saw more clearly than did the great playwright Aeschylus,[32] the wretchedness of natural man, while he portrayed the downfall of great individuals to deeply impressed audiences. No matter how mighty the will-power of an individual, no matter how firmly he might persevere in a definite purpose or in the doing of courageous actions, he would, said Aeschylus, be found guilty by the world around him and plunged into ruin. And when man sought strict justice or wished to achieve revenge in the traditional manner, he himself became a doer of evil and the shades of insanity followed upon his path.

The demon Furies hound Orestes, in the Aeschylean drama. All his life is a tragic death. But in the holy place of Apollo the unheard-of happens. The word of the god alters the rigor of the law, mercy usurps the place of justice, and Pallas even soothes the Eumenides with shrewd counsels. More clearly and humanly still the mature mastery of Sophocles [33] fashioned the tragedy of Oedipus, the self-reliant, the δίπους of the riddle of the Sphinx. His cry of pain rose heartrendingly above the voices of the crowd, as he carried out his own mandate of self-made justice against

[32] Aeschylus (525-455 B.C.) was the first of the great Greek tragic poets, and the author of some ninety plays, of which seven tragedies have been preserved. Reference is here made to the *Oresteia,* a trilogy.

[33] Sophocles (496-406 B.C.) was an Athenian dramatist who seems to have lived a long and happy life. *Oedipus Tyrannos* and *Oedipus at Colonos* are among his greatest plays.

himself, though he was a king not subject to judgment. And yet this Oedipus, whose instincts bequeathed by inherited sin had made of him a parricide and a perverter of the laws of love, was summoned, after penitence, by the luminous god of Delphos into the holy wood of Colonos—so rich in mysteries —and was redeemed with a tender word of grace. Alone and staunch, led by the god himself, the just King entered into peace. The Apollo of Sophocles had pity on the man who sought truth with all the power of his soul. In the dramatist's eyes, a human being overwhelmed by tragedy is the victor, the man before whom the Sphinx falls vanquished. Sophocles beheld over the unbearable misery of the human lot a clarifying and explaining metaphysical light which supplied meaning. Tragic, in his eyes, was a great man who, knowing his limitations, carried his idea to success even though he himself tumbled on the field. But the little man, who felt at ease in a narrow sphere which he could survey with a feeble eye, and who considered whatever he did important—this man Sophocles found essentially comic. Later on, when the emancipation of the intellect had led to calm rational contempt for reverence and the search of God, there stood in the background the abiding laughter, not of the bloody Furies, but of Aristophanes.[34]

The Sophists

The Sophists,[35] who flooded Athens with their somewhat hectically advertised learning and made money out of teaching young noblemen various tricks of oratory, were gram-

[34] Aristophanes (440-380 B.C.) was the greatest Athenian writer of comedy. *The Frogs* is his most familiar play. On the subject of Greek drama see Gilbert Murray, *A History of Ancient Greek Literature* and R. C. Jebb, *The Growth and Influence of Classical Greek Poetry.*

[35] The Sophists began to appear about the fifth century B.C. They followed the social upheaval caused by the Persian and Carthaginian wars, and were to some extent the "patrons of democracy."

marians and rhetoricians, lawyers and critics of art, cunning and coldly intelligent travelling professors. The Athenian aristocracy made merry over the idea of academic salaries, as was the custom of the time; it is a form of mirth we no longer quite understand. The Sophists were the first professional scholars and in their special sciences they rendered not a little honest service. The methods profitably employed in their own branches of study might, it seemed to them, be used successfully in answering the great metaphysical questions, especially that concerning being. Man is powerless to settle these problems, the psychological criticism of the Sophists decided. He can find, not truth, but only that which he finally seems to find true. "Man is the measure of all things," taught Protagoras, the most important of the Sophists; and he began to emancipate Athens from the wisdom and belief of older times.

Protagoras

Thus Greek philosophy profoundly altered the direction of its thinking and for a while agreed with Indian reflectiveness. Of course, the natural philosophers since Thales had upon occasion inquired into the soul, but they had known it only as a motive force or an energized, rarified "matter." They had praised thinking and found fault with the senses, but these things were matters of secondary importance to them. Works of art, rich in metaphysical speculation, first asked the sphinx-riddle about the nature of man. Eleusis and Delphi combined in the demand—"Know thyself." The goal of the Sophists was to conform to this demand scientifically. Before man can express his vision of the reality of things, they affirmed, he must prove his fitness for the task. How many colors has his eye projected by imagination into the picture of the world?

Protagoras [36] was interested in the *qualities*, rather than in the *things*, manifested by the senses. If all men agreed in the impressions they had received at the same place, they would ascribe to the object perceived the quality latent in the sensation. If all concur that the same leaf on a tree is green, they say, "This leaf is green." If they all filch some of the same pot of honey, they affirm "This honey is sweet," provided all experience the same sweet taste. And if this sweetness appeals to all of them, they will vote the honey a choice viand, just as a child cries "bad table" when he has hurt himself against it. But because the sweetness of the honey is disagreeable to many persons, who refuse to share the opinion of others as to its being a choice viand, it is obvious that one must accept everybody else's view and refrain from argument about tastes. And therefore, a mature man will no longer ascribe his sensations of pleasure and pain to *things* as their qualities, but to *himself* as experience. He will speak of "my joy, my suffering," and not of "the joy" in this or that.

But we may remark that even so he will not have learned to say, *my* red and *your* red. He will speak of the red of the dress, because this is what all men seem to perceive. Little divergencies in color perception cannot alter this situation. A slight haziness of vision can be accounted for by ascribing it to the subjective organization of an individual, which may prevent his seeing the color "red" as it is in reality. But the whole process involves other facts which Protagoras observed very sharply. Honey tastes sweet to a healthy person, but bitter to one afflicted with some malady. Now bitter and sweet are irreconcilable opposites. One might object that

[36] Protagoras, who lived from about 485 to 411 B.C., was the first to call himself a Sophist and to teach for pay. He seems to have collected some very handsome fees. His famous maxim, "Man is the measure of all things," is almost a summary of his agnostic doctrine.

there is such a thing as a "bittersweet" flavor, but this would not dispose of the Protagorean argument. The healthy man concludes, honey is sweet; the sick man, honey is bitter. Both cannot be right. The principle of contradiction is here slyly invoked as a basis of logical deduction. The Sophist, too, wished to avoid accepting contradictory judgments; and so he ascribed perception to the *subject*. What is sweet to me is bitter to you. Thus the difficulty is disposed of. Man is mistaken if he believes that he can learn the properties of real things, declared Protagoras, because man can know only what he perceives.

This doctrine of the subjectivity of qualities perceived by the senses had a very great influence upon the development of the natural sciences. It went hand in hand with the theory proposed by Democritos to isolate these qualities from objects, so that the work of measurement and calculation might be simplified. Physics thus declined to examine these qualities, and it remained the task of psychology to account for them. This methodological simplification made it easier to determine the boundaries of the sciences. Nevertheless the Protagorean construction is only hypothetically correct and not completely explanatory. It is still necessary to account first for the fact that man ascribes his perceptions to objects and secondly for the differences in the objectivity of qualities. One is always readier to say "I am warm in disposition" rather than, "I am red of disposition." But for the purposes of natural science the construction is so useful that it is likely to be resorted to constantly.

The Skepticism of Gorgias

This theory of Protagoras concerning the subjectivity of sense perceptions is the most important philosophical achievement of the Sophists. Beside it there were established

fundamentals of a skeptical philosophy for which Gorgias [37] found the most extreme formulæ. One can, he said, define being in the sense of Heraclitus, in which case "becoming" and "disappearing" remain but nothing that is real abides; or in the sense of Parmenides, in which case all the properties of changing things are taken away and it becomes impossible to say what "being" really is, so strange is the residue. Both ideas can be established and disproved; and so there is nothing more contradictory than being, and therefore there is no being. Even if there *were* a being, nobody would be in a position to know it. Our perception of an object is something entirely different from the object, and incomparable with it; in quite the same way, our thought about "being" is really only a thought, and not the "being" which it is incapable of compassing. But even if knowledge of being were possible, men could never arrive at any agreement about it. For the perceptions of men disagree with one another, every one is the victim of some sensory mirage, and it is doubtful if all mean the same thing by the same word. Who can tell if what seems to me red does not appear green to my friend?

These skeptical arguments, invented by Gorgias' ready wit, really strengthen the case for scientific thinking when they are properly understood. The definition of "being" cannot be sought in arbitrarily constructed theories; step by step, in a spirit of conscientious toil, observed facts and hypotheses to account for them must be brought into harmony. Obviously the content of a perception and the property of an object are not necessarily the same; but the information which the senses supply is also not necessarily merely

[37] Gorgias (483-375 B.C.) was born in Sicily but spent most of his life in Greece. He came to Athens in the first place as ambassador from his native state, and was much admired as the finest exponent of Sicilian rhetoric. Two extant orations are attributed to him, but not all scholars agree upon the authenticity of these. See Jebb, *Attic Orators*, vol. 1.

the fact that one is conscious of that information. It would still remain to be seen whether or not there were facts on the border between subjective and objective experience. In addition, a simple and unstudied picture of the world might be developed and improved. Finally, though it cannot be denied that there are differences in the reliability of perception and that an individual is likely to be deceived by his senses and—what is more important—to make mistakes in observation, the reliability can be tested, the mistakes can be rectified, and the causes of deception can be removed. And in so far as definitions are concerned, the trouble is really that they can be victimized by inexact usage of words.

Naturally enough the Sophists would have profited little by such a verification of observation and definition. Their plays on words would then have failed to entrap listeners. Their curious dialectic was a source of keen pleasure to the Greek mind, which enjoyed it with almost childish glee. People continued for a long while to write thick books about Sophistic quips of phrase, all of which can be easily solved. The following is an example of a catch question:

Question: Have you removed your horns? Here the answers "yes" and "no" were considered equally calamitous. For the "yes" would mean that one had had horns once, and the "no" would mean that one still possessed them. But the answer "no" is nevertheless wholly correct. One did not remove them because one never had them. It does not follow logically that the "no" implies the possession of such adornment, because the question merely attempted slyly to impose possession.

Morals

These dangerous toys of the skeptical intelligence need not be discussed in detail, but one should note that their primary object and effect was the dissolution of morals.

The proud, though still very young, Sophistic science of reflection despised all common sense and inherited wisdom. Like the earlier development of physical science enlightenment, the Sophists and their system were cold and uncomprehending towards historical tradition and conventional morality. Even some stock questions like the one we have cited—especially a very familiar one about the supposedly beaten wife—made sport of family relationships. Their questions displayed their animus more openly when they referred to the state and to the obedience men ought to pay to the laws.

Here caste instincts long suppressed demanded liberty. The free man brought up according to the Athenian code found this summons to license dishonorable. Loyalty seemed sensible to him and he believed marriage was the natural desire of free men. But all such sentiments were mere convention to the Sophists, because whenever the reason of an individual presumes to be the self-sufficient judge of truth and worthiness, the community succumbs. The Sophist understood nothing of the ties of blood and national fraternity. He spoke rather of bargains and agreements. The laws of justice and morality are not founded in being, he declared, but repose only on common consent. The wise man listens only to nature and so to his unshackled instincts. Thus a new ethics based on man in "a state of nature" laughed at fools who obeyed divine and human mandates. If one believed the illuminated Sophist, free love, good fortune as a bringer of victory in the battle for existence, realization of the will to dominate—all these seemed to have been commanded by nature. Obstacles such as respect for what was old and pious faith became figments of the brain, or the invention of querulous priests.

This theory of the Sophists was, when applied to the state and to law, really far from correct. If all men are

partners to the social contract, then all are equal before the law. Nobility and slavery must be done away with, women are to be full fledged citizens and every citizen must have the same right to education and property. This liberal program, for all the amelioration it offered to certain rigors of existence, misunderstood the natural differences between men and races, between human endowments and varying stages of development, to an extent which rendered the ideas of government derived from it wholly utopian. No such recipe could be applied to all peoples in the same manner. Indeed, the philistinism involved in it led the more extreme of the Greek individualists to declare that no mandate of law was binding on the strong and crafty persōn. They averred that ancient moral habits were only bridles which the powerful had placed upon the people in order to dominate. The newer morals were said to be merely measures of combat used by the jealous and curbed people against the "superman" who at heart thought laws were only a practical web which he himself knew how to avoid while imposing on others whatever he pleased. Thus the Sophists not only expressed the feeling of an unruly epoch, but influenced the future in a decisive manner. Hellas sickened with their poison, and paid for the joys of its moral emancipation with political downfall.

The picture of this unhealthy condition is most terribly and impressively drawn in the dramas of the great Sophist poet, Euripides.[38] Man, particularly if he be noble, is there seen at the mercy of an implacable fate which is prepared for him by meaner mortals driven by blind passion. The most horrible of all demons, however, are the gods who in meaningless anger destroy the great achievements of heroes who inspire respect. With stark purposiveness and painful

[38] Euripides, one of the great tragic poets, lived from about 480 to 406 B.C. Many of his plays have come down to us and among them are *Hecuba, Medea and Orestes.*

effectiveness, the tragedy of Euripides negates all concepts of retributory justice, in that it heaps accidental and ignoble punishment on the heads of the innocent. Not a ray of metaphysical light brightens its blackness. Thus ended a system of thought which kept nothing in mind excepting its own poor, narrow and unreal theory. The propaganda of restless demagogues and agitators corroded, with restless and clever criticism, a rich culture which did not fit into their views. Without understanding history or the basic standards of worth, it blasphemed the Divinity it did not comprehend.

CHAPTER II

MAJOR GREEK PHILOSOPHY

1. Socrates [1]

Against the boundless arrogance of philosophical levity, the great, pure soul of Socrates arose in anger. Let us see him in one of many pictures. It was a chill winter day in Athens: there were flurries of snow, through which a few citizens hurried uncomfortably toward unavoidable or desired goals. Only a little and not fully grown figure, with a disproportionately large stomach and a head surrounded with unkempt and greying hair, walked about slowly and without an end in view. The man had muscular power in plenty to control his actions, but his thoughts were far from the road his feet were taking. Sometimes he stood still with his head bowed, buried in silent brooding. His vacant stare was fixed on no object. But the fact that the Athenians did not deride him was hardly the result of the bad weather.

[1] Socrates (469-399 B.C.) is one of mankind's most representative moral heroes. He seems to have been something of a sculptor and a student; he served as a soldier and was noted for personal bravery; and by his wife Xanthippe, whom tradition has voted a shrew, he had three sons. The major portion of his life was spent, however, in the public squares of Athens where he argued with anybody who cared to argue concerning the nature of man and the appositeness of popular Sophist views on public questions. Everyone should read the dialogues of Plato—Apology, Crito, Gorgias and Phaedo—in which the character of Socrates is interpreted and to some extent idealized. Xenophon's *Memorabilia* present a somewhat more prosaic and realistic account. The best book in English is Zeller's *Socrates and the Socratic Schools.*

They all knew this Socrates and had laughed their fill at him already.

Suddenly a handsome young man, also troubled very little by the falling snow, approached the abstracted wise man. The gaze of Socrates brightened. "Can you tell me one thing?" he asked. "What then, O Socrates?" "Do you know what it means to speak of a just man?" Strangely enough Socrates fascinated and interested the wild young blue-bloods of Athens more than could the princely dignity of a thinker like Empedocles, or the pompous gestures of the influential Sophists. This puzzling greybeard, seemingly in touch with unearthly spirits, drew the inquiring young fellows to himself. With them he had been a soldier, and he still remembered how to converse with them. His queer inquiries were also magnetic, because they proved how much in earnest he was about Truth. For this Truth he neglected home and appearance; and his wife Xanthippe was often pardonably provoked to anger. His eagerness to indulge in argument everywhere likened him to the Sophists, whose bitter enemy he was; but he differed from them in that he would not take money, or teach people to make black out of white. Socrates had also asked the natural philosopher about righteousness, and had been told that the just soul was an equable and gently moving collection of "fire-atoms." Now either because he thought that this answer was satirical, or because he felt his question had not been understood, he refrained thereafter from discussion with the physicists. When asked about the nature of being, said Socrates, they always replied with mere relations between unknown things. In his doctrine, then, philosophy parted from the observation of nature; and that is a necessary, though a tragic, occurrence. Perhaps it is the peculiar problem of our own time to bring the two things into harmony once more.

The Just Man

And what did our young Athenian—Alcibiades—say to Socrates? His reply was quickly made: "A just man, O Socrates, aids the business of another as warmly as he does his own, and judges his own business as coolly as he would another's." Socrates smiled and asked him again, "Supposing a fortunate or a powerful man should do these things ostentatiously, so that others might honor him; do you believe that such a one ought to be termed just?" Alcibiades protested that this calculating individual would not have acted from his heart. "But," said Socrates, "had you said anything about heart? No, I heard nothing about that. What would you hold now of the heart, if it were really inwardly just?" Alcibiades was perplexed and Socrates dealt gently with him. "And so at bottom you do not know what you mean by a 'just man,'" he declared, "and yet you use the great term often and gladly. Now I thought I could learn it from you, because I myself do not know. It is clear, is it not, that both of us understand it equally little? There is just one difference between us. You thought you knew the character of justice; I knew that I did not know." In this fashion the man of whom the occult voice of Delphi had prophesied that he was the wisest of the living was both ironical and helpful. Thus he drew out an admission destructive of the Sophists—we really know very little. The implacable investigator and critic of himself assisted the birth of logic and of the theory of knowledge.

It is not sufficient, Socrates replied to the Sophists, to have ready for every occasion opinions which, as quickly as is possible, confuse and override. Convictions must be genuine, steady concepts. The right concept is one which unfailingly agrees with the nature of the thing designated, with its "self"; and it must distinguish this thing from all others.

Only so will this concept, shared by all friends of the Truth, have worth as an idea of an honestly considered object. Socrates was always searching for clear definition and exact description. Most of all, however, he was interested in arriving at a knowledge of what virtue intrinsically is. People have often wondered that a man as wise as Socrates should have been so diligent in striving after data about virtue:—for, so these people say, one who knows virtue will not therefore necessarily practice it. Those who make this point are ignorant of the true character of Socrates. Uprightness was so native to him that all his life long he did not believe that any one who really understood what virtue is would fail to cling to it always. Socrates was the natural conscience of mankind (the "just heathen"), and so his life is itself a fragment of philosophy.

Virtue

There is still more to say, however, about his teaching of virtue. His knowledge of righteousness does not serve, as the mediocre biographer Xenophon thought, as a guide to show how to get on successfully and honestly in the world. Socrates, it should rather be noted, knew that the ethics of a man depend upon his conception of the world. That all things are in chaos and disarray is a belief which naturally follows from the skepticism of the Sophists. But a man whose view of the world is clear, comprehensive and well-reasoned will know the difference between good and evil. Insight into conscience is impossible without knowledge, Socrates said correctly; and a certain modern contempt for thinking does not destroy the value of his doctrine. Of course, only the free personality which is master of itself is at liberty to judge its actions according to recognized standards. But Socrates himself was such a personality,—a defender of morals and justice against license and arbitrary

rule. He sacrificed his life for this conviction. And so Nietzsche and Aristophanes were mistaken in seeing in him the thinker who led the western world to a fatally dangerous over-emphasis upon scholarship and theoretical learning. The real reason why these two artists were driven to attack him, is that he in turn waged war upon the exaggerated respect that was paid to artists and to art itself. Obviously art does not speak the last word in the battle for truth, nor is the artistic genius a model of how to live.

These Socratic commonplaces are not dear to effeminate or over-civilized times, but that is only an indictment of the times. Scribes and rhetoricians were also the accusers of Socrates on the score of godlessness. His simple defense was that he had been called by the God. His sense of the active good in the world was keener than that of Athens, the freedom of which was passing; and so the judge could condemn him with an untroubled conscience. The end of the great wise man was tragic as well as triumphant. They left his prison open but he refused to flee so that justice might be accomplished. The days which custom allotted before the end were spent in conversation with friends. In a spirit of resignation he drank the hemlock and spoke to those who wept about the immortality of the soul and a life to come, a better life, which God would give the Just. Then the last sunshine of the evening illuminated his prison cell like the glimmer of undying fame, as a poet tells us who was also the disciple of Socrates—Plato.

2. Plato [2]

Socrates was opposed to the Sophists for reasons of conscience; Plato, in whose veins ran kingly blood, was indig-

[2] Plato (427-347 B.C.) was born on an estate on the island of Aegina, which was ruled by Athens. We are led to believe that he was educated as befitted a goodly Athenian young man, and that he could boast of a

nant at the disregard for law which had set in with the era of intellectual emancipation. Born in the year when Pericles died, he saw that the great civic achievement of this ruler was everywhere in decay, and he speculated bitterly upon how it might be reconstituted. It was natural, therefore, that the teaching and conduct of Socrates should win his whole heart. He had been a young tragedian. Now he burned all his poems, knowing that art cannot find the final formula of truth, and tired of all the factitiousness of materials which never seemed to him worthy or earnest enough to engage the energies of a man. The scene of his new life became the

considerable acquaintance with music and rhetoric. It is said that after the unjust death of Socrates he left Athens and visited Sicily and various other countries. However that may be, he was back in Athens and busy establishing the Academy about the year 387 B.C. This, named after the hero Academus whose grove adjoined the land upon which Plato established his first Athenian university, was one of the greatest educational forces known to antiquity. He taught such men as Aristotle and the orator Demosthenes. About 366 B.C. Plato was drawn into practical affairs through an ambitious attempt, fostered by the younger Dionysius, ruler of Sicily, to establish an "ideal republic." The scheme failed, and it is likely that tradition is correct in saying that Plato's old age was considerably saddened as a consequence.

Jowett's English translation of the *Dialogues* is so good that it almost takes rank with the best of native English literature. Plato's writings had been carefully arranged by Thrasyllus, a rhetorician who lived in the first century A.D. Some things included in this collection are now considered spurious, but the authenticity of the major works is unquestioned. The most important of the *Dialogues* are: *Republic, Laws* (dealing with a plan for the betterment of society, education and law); *Timaeus* (a theory of the universe); *Sophistes, Parmenides* (devoted to problems of logic and metaphysics); *Meno, Charmides, Lysis, Philebus, Critias* (generally ethical in character) and the "Socratic" dialogues proper, which have already been mentioned.

The number of works devoted to Platonism is very large. Zeller's *Plato and the Older Academy* is a standard work. The humanistic reader may enjoy some of the following: Walter Pater's *Plato and Platonism* (melliflu-ent lectures, very appreciative and personal); Paul Shorey's *The Unity of Plato's Thought;* and Paul Elmer More's *Plato* (a projected series of four volumes, three of which have appeared).

school of Socrates, whom he followed until death separated them. But, of course, one does not cease to be a poet when a few youthful works have been burned. Plato delineated the teachings, defense and death of Socrates in marvellous colors; and he placed upon the lips of his master his own views of life. His dialogues elevated the unformed Socratic conversations into a noble form of art having its own style—which is not to be confused with that of the short-story. Their content is of the most earnest and solemn character, being the speech of a seeker after truth. Plato's ideal state is also a poetic conception. The Sicilian statesman Dionysius could not transform it into a real republic, nor did Plato's two voyages to Syracuse help to render it practicable. For in the final analysis this visionary political poem had to do solely with a kingdom of the spirit.

The Key to the Platonic View of Life

The whole of Plato's speculation about truth, lofty and often veiled in a severe calm, is a kind of Sibylline contemplation of ideals. In order to find the key to it, one must bear in mind that he was surrounded with masterpieces of plastic art; that the tragic stage also offered the eye plastic rather than pictorial figures; that the rigid mask made it impossible for the actors to utilize changing facial expression; and that Plato enthusiastically admired the statuesque Hellenic young men. Of course he began to think by reviewing what earlier philosophers had accomplished. It was part of his very nature that he should feel a deep respect for Parmenides, and he accepted almost as a matter of course the principle that only that is worth knowing which *is* and does not change—that that which never *is* and always changes is of no value. Both of them were alike in demanding of the object of their thought a calm and permanent fidelity to the concept they formed. Plato never saw, as did

Heraclitus, that an unchanging concept might *signify* ebullient change.

Plato and the Earlier Philosophies

To a man thus constituted, the conclusions of a Sophist like Protagoras could only seem a mirage of inchoate happening, on dealing with which a wise man would squander no time. There is no reason why we should overlook, as so many do, this weakness of the Platonic system. It lost the connection between speculation and natural science by refusing "to preserve the reality of appearances through all possible interpretations"—*salvare apparentia*—upon which Democritos had so wisely insisted.[3] Nor did Plato's preference for mathematics render his argument against Anaxagoras' study of physics, to the effect that it teaches only relations between things, wholly convincing. He insisted, thereby revealing Pythagorean influence, that the first object of nature exploration must be to measure objects by mathematical methods; and he added that if general philosophical knowledge of "that which remains permanent in the midst of change" was to be gained, it must be expressed in mathematical terms. Plato, the man of plastic culture, therefore sought first to arrive through mathematics at a knowledge of the smallest abiding substantial forms, thus reminding us not a little of Democritos' atom forms. Indeed he went so far as to seek to mark the boundaries of all primal forms with the most minute conceivable triangular areas,—a very peculiar application of a mathematical principle. The relations thus established are not accepted from nature but are invented without much regard for observation.

Here lie the roots of all false philosophies of nature. The stream of images that denote objects is granted hardly a

[3] See page 32.

moment's attention, and yet the philosopher expects to find "that which is constant" in its manifold flow. This is an erroneous contempt for cosmic reality, an inadequate theory to account for appearances, quite in the spirit of India. Plato seeks that which is common to all things, the changeless "self" of things; and he does not weary of saying, "the self, not anything else." For, he insists, thought which is given to flitting appearances will itself become insubstantial; but thought directed to that which is eternally changeless will grow into worthy knowledge. He is not correct from the point of view of nature study, even though he is right from a religious point of view, in exactly the same way as the assumptions of Indian philosophy were right. He then goes on to ask: What is the self of things? The "ideas," is the reply. Beware of taking this to mean, the "notions" of things. The "ideas" are *that which is thought*, but not thought itself. They are the unchanging objects of our thinking about things. The "self" is not opinion, but that which is excellently realized in opinion. The "idea" is not a pure concept which is without the quality of perceptibility; it is, rather, form existing beyond what is visible.

The "Ideas"

Even geometric forms, says Plato, granted an infinite tenuity of outline, cannot really be termed visible, because they are wholly without color and light. Yet they are not mere thoughts, any more than numbers are thoughts, but rather the *objects* of thought and of an understanding of attributes peculiar to them. These geometric forms, which Plato always likes to adduce as examples, have manifold relations quite different from the relations of concepts one to another. For example, concepts do not intersect, and planes do not contradict one another. Thus it is also with

"ideas." They contain a wealth of qualitative characteristics, which can be thought of without their themselves being thoughts. They are, in short, absolutely unchanging model-forms of all good things, and are of more than visible beauty. One always ascribes to the "idea" of man eyes more perfect than ever existed or have been created by art. Therefore the "idea" of man is not a categorical or a pure concept, for such concepts are necessarily without eyes. This explanation was unavoidable because of the misunderstandings which arose. The idea is the "original" of an object: it is not a fundamental concept, but a fundamental *content* of a concept.

Those who honor Plato as the great poetic interpreter of plastic culture will find the key to his doctrine of ideas. The heroic tragic figure, as it appears to the plastically visionary poet in his meditative dream, wears a changeless and unmoving masqued countenance; but all movement of the form reflected from it upon the stage—movement which drives it toward dramatic destiny—is nevertheless, when compared with the model original, only a feeble reflection of beauty. In vain the poet and the actor attempt to imprison such unearthly loveliness in pictures and words. Their drama is disappointing when presented. It seems empty and shadowy even to its creator; it is not the same thing he saw in his moment of vision, but another, lifeless thing. In the same light did Plato behold this imperfect world under the moon, the universe of accidental change. The wise man, he thought, can only turn aside from it and seek the original, which blooms in spiritual radiance. But he cannot consider the cloying stuff of which all the things of this earth are made non-existent, and therefore his idealizing poetry oversteps the boundaries of plausibility when it pretends to believe that matter is not real.

Matter

Platonism considers matter unworthy of being known, and even non-existent, because it is alien to the discovery of truth and subject to meaningless alterations. Yet it would be an exaggeration to say that matter was "nothing" to Plato himself. Its unfathomable darkness sufficed, at least, to dim the light of the "idea" and to interrupt the poet's glowing dreams. Matter, he said finally, is merely remote from knowledge, which inevitably finds peaceful contentment in the contemplation of the "ideas." Such an idealistic hypothesis is quite as inadequate an account of the material world as the theory of Democritos is remote from spiritual reality. There is no such thing as materialistic psychology, but there is also no such thing as idealistic physics. Of course Plato is not the exact reverse of Democritos, whose opposite pole is really the more modern spiritualism of Leibnitz. Platonism, in essence, considers matter unworthy of being known, and observation of the material an occasional incentive to contemplating the "idea."

The faculty of contemplation, according to Plato, is the distinguishing characteristic of the philosopher, who thereby rises superior to the poet. That it is humanly possible is proved by geometry. Wholly apart from the observation of natural phenomena, the student of Euclid can build up a great number of forms and arrive at necessary, adequate and absolutely undeniable conclusions about them. Properly asked for, the answer to a mathematical inquiry will be given in the same way by every intelligent person. Thus everyone can see the forms according to which earthly things are made. Mathematics becomes the model of a philosophy isolated from experience with reality. Here again, one must admit, Democritos was endowed with clearer insight. Man possesses no occult power to create geometrical forms out of nothing:

lines and circles are borrowed from the data supplied by observation. Of course we simplify these forms, and immaterialize them until they are not immediately comparable with other things—though it is only recently we knew we were doing so. Plato was struck with the grandiose notion that ideal forms could give man extraordinary experience—"ideal" experience. That led him to overestimate the ability of philosophy, but his noble enthusiasm was guided by an imagination often profoundly sibylline in character.

Objections to Platonism

Plato's rhapsodies are frequently couched in obscure phrasing, but out of the fog there do issue dazzling gleams. In all ages unanswerable questions have been brought to bear on his views. The query as to where the "ideas" are situated is meaningless: they no more have a definite location than do the intuitions of a poet, but that does not necessarily make them mere phantoms of the mind. "How many ideas are there?" is another poser. Are there ideas of the tree, the pine-tree, the oak-tree? Yes. And also of the leaves? Yes. Of the green of the leaf, too? If so, how can one classify this complex variety? Plato the poet was content not to be precise about the number and differentiation of the "ideas." He assumed that they exist in indefinite number, because everything that is of value is the reflection of the splendor of its individuality complementary "idea." Some critics often infer that the hierarchical ordering of the "ideas" is dependent upon the relative universality of the concept which realizes them. But closer and more detailed examination proves that this inference leads nowhere. The most universal concept is that of being, and not much more restricted in extent is the concept of world. But Plato's highest "idea" was neither of these. It was the idea of good. He therefore arranged

his "ideas" in accordance with their worthiness, although he did not fully develop even this principle.

Religion

Is it possible to account for all these darknesses without disparaging the greatness of the man? Yes, if one adds to the æsthetic keys to Platonism which have already been mentioned, another key religious in character. The World of Ideas, of which he spoke with awe, is above and beyond the earth. He attributed too much power to human nature, his poetic enthusiasm was extravagant, when he assumed that man could contemplate "ideas" directly. But if one understands Plato's cosmos, which exists by reason of the "ideas" alone, as a transcendent world, in which things, however imperfect they may be, are nevertheless aglow with a glimmer of beauty, then one will realize that idealistic philosophy, in its positive declarations about this world, is explaining the next. Plato's affirmative judgments mean this earth less than they do a heavenly Jerusalem—a new heaven and a new earth.

In occasional and rare utterances, Plato concealed the thought that the "ideas" are the spiritual property of God. In Him is founded their reality: they are not akin to matter and flesh. Only the negative judgments of Plato really apply to the cosmos, the manifestations in which are (he affirmed) quite different from the "ideas" and, in a certain sense, do not exist at all. Only one trail points out to the soul, exiled here below, the road to the more beautiful existence. Obviously such an interpretation of facts is not likely to explain satisfactorily the relationships and attributes of things in the physical universe. But the melodies of artistic and religious fervor which Plato's muse indites to the *other* world are most impressive. The soul of man, which is neither a primal reality like the "idea" nor not-being like matter,

hovers between the heaven of truth and the earth that is nothingness. An indescribable hunger drives it about the earth. Men desire food, clothes, power and loved ones; but peace comes with no wish that is granted. They go on expecting still more delectable satisfactions. Then suddenly the beauty of art and of men lightens the heart with a pleasant surprise. The sculptor, says Plato, cannot piece together from well-turned fragments found here and there, the loveliness of that human form which stands before the eyes of his soul when he conceives of an image more beautiful than any young man could be. Thus every artist is inspired, not by his past life on earth, but by his realization of the "idea." And greater and nobler than the impulse to carve cold stone is the love which leads the reflective wise man to form plastic youth according to the idea of the Good. Ethical enthusiasm is visibly the flame on the altar of the Platonic poem.

Realization of the Good

The man endowed with power to elevate himself to contemplation of "ideas" and their relative worth is seized (says Plato) with an intense desire to realize the Good, to make earth more like the "ideas." Not all men are so endowed, and therefore different virtues should be fostered by different people. The citizen of earth, who navigates in the swirl of phenomena, ought to free his soul from the blind energy of instinct through thoughtful temperance of his needs, cravings and liberties. He who can conquer himself to the extent that he can steel his courage to serve the welfare of his fellowmen, let him practice this heroic virtue. The philosopher, however, cannot be satisfied with merely knowing values; he must also prove his wisdom in action. Thus all will do what is expected of them in their calling, and thereby all will realize justice. The field of human action is the state. Its authority prescribes for the citizens what they are to do

(that is, what virtue they are to practice), because the majority cannot discover this of their own accord. The power of arms shall defend zealously the eternal rights of the state. The rulers shall be the wise who have been illuminated by the "idea" of Good. Ownership of the means of existence shall be distributed according to social justice. Education shall rear men to be temperate, brave and thoughtful citizens; and those who are especially gifted shall be carefully prepared for wisdom. The state shall cultivate beauty, but shall root out the error that the gifted artist is the proper model of youth. Beauty shall be made humble in the service of truth.

People have—often enough—attempted to lower the Platonic state to the level of a pale specter created by an erratic dreamer. In so doing they have drawn attention to the diplomatic corruptions of "politics," to which the morals of citizens, the purity of art and the health of woman are not matters of primary importance. But in reality Plato was not describing the wordly state (though he himself fancied he was); his practical failure and the whole development of the future proved his ideal incapable of realization. There is, however, a royalty of the spirit which, upon this poor earth and in the face of a thousand obstacles not the least of which are to be found in the human breast, permits the wise to rule, defend the state and heal the souls of the children of men. Plato's ideal was to some extent made real in Christian mediæval Europe. But this prince of poets had caught a visionary glimpse of a still more illustrious reality. Consider the sibylline passage in the second book of the *Republic*, the meaning of which is as follows: "Let us speak thoughtfully of the just man, the simple and noble-minded man. With Æschylus we must attribute to him no mere appearances of character. We must take from him all symbols of honorableness, leaving only his righteousness. Although he has done

no wrong, this man shall have against him the accusation of a great sin; and untarnished by the calumny, he shall be true, without wavering, unto the end. . . . Ah, dear Glaukon, I said, what lot would then befall such a man. . . . So then it shall be said, that the perfect just man shall be scourged, tormented, bound, covered with all manner of suffering, and finally hanged upon a tree." In this awesome manner Plato deepened the Socratic speech concerning the just man. *Teste David cum Sibylla.*

3. Aristotle [4]

If Plato was natively a seer, Aristotle was born an investigator. He possessed, it is true, a poetic gift, but it did not lead him to violent disregard of the facts of observation. His

[4] Aristotle (384-322 B.C.) was born at Stagira, a town on the Strymonic Gulf. His father was a famous physician, and belonged to a family renowned for medical knowledge. After having received a satisfactory education, Aristotle went to Athens where he enrolled in the Platonic Academy. When the master returned from Sicily he (it is said) discerned at once the brilliant gifts of his pupil and formed a deep friendship with him. After Plato's death, Aristotle travelled considerably and spent three years tutoring the future Alexander the Great. At the age of fifty he returned to Athens and founded the Lyceum, lecturing in a building called the "Walk," from the Greek name of which "Peripatetic," a word now commonly applied to his philosophy, is derived. He fled from Athens in his old age and died at Chalcis.

The literary productivity of Aristotle was enormous. The rhetorician Diogenes Laertius enumerated 46 works, and other commentators give a still larger figure. Some of these writings were dialogues, composed with a modification of the Platonic manner, and served Cicero for a model. We have, therefore, every reason to believe they were notable for literary style, even though the few fragments which have been preserved are not very impressive. The extant treatises of Aristotle include: Works on logic (*Categories, On Interpretation, Topica, Analytica Priora, Analytica Posteriora, Sophisms*); Works on "first philosophy" (*Metaphysics,* which formed 13 books and are preserved in a faulty condition); works on natural science (*Physics, On the Heavens, Metereology, On Beginning and Perishing; Natural History*); works on psychology (*On the Soul, Parva Naturalia*); works on ethics and politics (*The Nicomachean Ethics,* named

calmness rendered truth a more valuable service than Platonic enthusiasm could. In philosophy, too, there are harvest seasons and lords of thought into whose hands the scythe is given. To them nearly everything is obedient and obliging. Aristotle of Stagira was one of these lords. He gathered whatever was extant of Greek investigation and speculation, and proceeded to construct his own thoroughly original system. He became the teacher of thousands of years; and today his influence is again increasing. His system is superior to that of Plato in the important sense that it was erected upon the broadest available basis of experience and that it reckoned with all the facts of natural science known at the time. In fact, his work is almost an encyclopedia of this science. The treasures gathered into it nurtured later times up until the era of Galileo.

The great Greek was not tainted with that philosophical pride which refuses to recognize facts carefully observed unless they fit into a pet system, or which will accede to judgments only when they are in the nature of mathematical evidence. He was satisfied with hypotheses, with judgments

after Aristotle's son, *Politics, Constitution of Athens*); works on rhetoric and poetics (*Rhetoric, Poetics*). With these there must be associated a great number of other books which scholars affirm were not written by Aristotle, but which are in some cases the work of men who must have been preparing digests of his treatises. This is especially true of the *Eudemean Ethics,* prepared by Aristotle's pupil Eudemus, the treatise on *Physiognomy* which is a later work incorporating some of the master's lost writings, and *On Plants*—a book preserved in a form which makes its authorship a matter of doubt. Finally, students of Aristotle depend considerably upon information derived from various ancient commentators. A complete edition of the Aristotelian texts has been completed by Bekker. Numerous good translations of single volumes are available in the Loeb Classics and elsewhere.

Modern comment upon Aristotle has added very little that is strikingly important. Some standard references are: Grote's *Aristotle;* Zeller's *Aristotle and the Earlier Peripatetics;* Brother Azarias' *Essays Philosophical.* The summary by Bishop William Turner in the *Catholic Encyclopedia* is excellent and succinct.

probably or approximately correct, where nothing better could be arrived at, considering the attained stage of investigation or the faculty of human reason. He carefully collected, to begin with, as many data of experience as he could acquire. With reference to these data he came out uncompromisingly for the realistic motto of Democritos—*salvare apparentia.* That which the doctrine of materialism had established as true was therefore not spurned in Aristotle's system of critical realism, as it was in all contemporary (and later) idealistic systems. As a result, the Aristotelian physics, not the physics of Plato (outlined in the *Timaios*), was destined to survive. In it there is a wealth of hypotheses which are, naturally enough, being more exactly phrased by the twentieth century. Aristotle's natural science, like that of all Greek thought, was, of course, based on observation, not on experiment. That suffices to indicate its limitations. Its hypotheses were merely those which seemed to explain most satisfactorily such data as were then accessible.

Antique Nature Lore

In the first flush of successful experimental science, modern investigators passed severe judgment upon the nature lore of antiquity. At present, when it would seem that the era of classical mechanics as formulated by Copernicus, Galileo and Newton is drawing to a close, it is easier to be just to the Greeks. In describing as he did the fall of light and heavy bodies, Aristotle was quite correct in so far as observation alone is concerned. He saw (as we still seem to) that the fall of bodies was determined by the "lightness" or "heaviness" of the materials composing them. To exclude the influence of atmosphere upon such bodies either by calculation or by experiment, did not enter the mind of a Greek observer who also knew nothing of the use of artificial bodies, such as nicely rounded homogeneous spheres, made according

to a mathematical pattern, for the study of the phenomenon of gravity. An earthen jug or a downy feather, as he saw it, sank to the earth in a different wise than a wooden or metallic ball. The experimental physicist of our day estimates more precisely than did Aristotle, but the actual mistakes of the great Greek are few. Many of his biological observations were ridiculed for a time, only to be accepted again later on as quite exact. In short, one constantly marvels at his great command of observed facts, at the carefulness with which he weighed accumulated experience, and at his characteristically Hellenic eye for detail. In his study of the soul, moreover, he may be said to have anticipated certain elements of modern experimental psychology. For instance, he mentions the fact that if the two opposing surfaces of a ball are touched with crossed fingers, the resulting sensation will seem to indicate the presence of two spheres. Aristotle is really an encyclopedia of astronomy, physics, biology and psychology, apart from the fact that he is a compendium of information concerning æsthetics and politics. In these last two branches, his opinion—that of the disciple of Plato and the teacher of Alexander the Great—has weighed heavily with all epochs. Still other special philosophical studies owe him their existence. Aristotle was the father of logic and of the theory of knowledge; and finally he was the first important historian of philosophy. He, the spiritual grandson of Socrates, dispossessed the Sophists of their domain of logic by supplanting their groping attempts with a complete and scientific system.

The Aristotelian Mind

The first schools of philosophy had appeared in Asia Minor and southern Italy, border districts of Greek culture. Soon, however, Athens became the magnetic center to which all spiritual forces were directed. Here advanced schools

of philosophy, headed by Plato with his Academy and Aristotle with his Lyceum, were developed to a more and more definite state of organization. Neither Alexander nor Rome could crush the spiritual supremacy of the city. Aristotle could not resist its charm. It is true that the dispassionate lectures and exercises at his university do not seem to have had the magical attractiveness of the Platonic dialogues. Nevertheless he did cherish a poetic guiding principle which shows his affinity with his master, Plato. This we may term the principle of the plastic artist and the block of marble. This block is not a work of art, but it is the stuff from which the work of art is to be made, and without which that work of art could not exist. The block is, therefore, *potentially* an artistic creation, but does not *actually* become one excepting through the *form* which the sculptor stamps upon it. This form (prior to its realization) is only an artist's dream, but it is seen and known before the splinters begin to fall from the rough stone. Nor is it by any means at the disposal of the artist's unbridled whims to impose every kind of form upon the block. Marble will break if one subjects it to a treatment which bronze alone would be suited for.

This central Aristotelian image leads also to the discovery of worth-while corollary facts. By mere mechanical necessity the surface of the marble gives way under the stroke of the hammer, but this mechanical happening serves the purpose of the sculptor. His idea of what the work shall be remains the model; and purposive and mechanical events are related to it without requiring any change in the idea itself. The mind of the artist can follow all these interrelations thoughtfully, contemplatively, actively. He examines the stone, calculates what can be done with it, and yet retains within the limitations of the given instance his power of adapting everything to his purpose. To this central symbol, Platonic in character, Aristotle then joined an image taken from the

great phenomenon of life. The stuff out of which the body is made changes constantly, but the individual figure nevertheless remains, even as the genus form survives the disappearances of an individual organic specimen. The child is not a man in completely developed reality, but he is a man potentially. Thus life bears its self-purpose within itself. It is constantly becoming what it essentially is. This second important symbol, one ought to bear in mind, was derived by Aristotle not from observation of inert matter moved from without, but from the reflective consideration of living organisms.

The Formation of a Judgment

Aristotle's answer to Plato was, therefore, that the investigating philosopher must always be instructed by the real world. He criticized the conviction of his master that the "self" of things must be looked for somewhere else than on earth. Let learning, he requested, seek ideas with which to understand the world, rather than ideas with which to run away from the world. A noble sense of reality, thoroughly Greek in character, thus banned an all too Indian dreamfulness. And because Aristotle's guiding philosophical principle was realistic, his formal logic also constantly gathered its examples from the actual universe. The meticulous industry of certain more modern thinkers has chuckled over the fact that a logical conclusion may be correct—that is, formally correct, even though its premises do not correspond to fact.[5] It has emphasized the circumstance that one can choose logic examples so foolishly that nothing essential or worth knowing is to be found in them. But the good sense of the Stagirite saw very well that under such handling the logical judgment simply loses its importance as a criterion of truth. He himself was conscientiously interested in finding out what

[5] This was, of course, well known to Aristotle himself.

could be accomplished by a logical exercise while the philosopher kept for his unswerving goal the accurate description of reality worth understanding. And "idea" was, for Aristotle, a wholly convincing opinion about the essence of the objects designated. This essence, he held, is that which is common to the phenomena indicated by a given term. To discover it is the purpose of a "universal" judgment. When there is question of arriving at such a judgment, definition seeks first to incorporate that which is the determining characteristic of a thing;—that which is proper to the object of knowledge itself. *To itself.* For if the object should lack what is attributed to it by the "universal," it would be defined as nothing and the "universal" would have no meaning. The "universal" judgment next ascribes to the object in question that which is essentially attributable to its genus. There remains that which separates the object from the genus—that which is peculiar to the object as an individual thing. And so if one would definitely know an object, the term which adequately determines the "universal" judgment must be adjoined to another term which adequately expresses the differentiation proper to the individual object. But if one makes the object the material of a "particular" judgment, one expresses only its essential individual characteristics, its specific difference. Finally, if one's concept of the object is to be inclusive and defined, both determining and differentiating terms must be given. The judgment which investigates reality is directed through its subject at a recognized but as yet unknown object. Through its predicate it attributes a quality to this object, or denies to it a quality. And accordingly the judgment will be positive or negative.

The Principle of Contradiction

With this Aristotle discovered the principle of contradiction in logical sequences. A property cannot be ascribed to

an object and then denied to it. Only one of these alternatives can be accepted. If we describe or suppose a relation between two things, this relation may then be affirmed or denied, but we cannot both affirm and deny at the same time. Of course this serves a purely formal methodology which is cautious only that an idea be always characterized in the same terms and not with any variety of opposite terms. But the mind bent on knowing reality has a higher purpose—to scrutinize steadfastly irreconcilable essential attributes. Such attributes are the predicates of judgments which contradict one another. Cold is a "not-warm" in a different fashion than red is a "not-warm."

Deduction and Induction

Aristotle crowned his logic with the teaching of induction and deduction, with the theory of premiss and conclusion. A straightforward categorical declaration is a form of judgment which lends itself directly to the description of objects according to their properties. It can be changed into a hypothetical statement; but though this is logically permissible, it is forced in character. On the other hand, the conditional judgment (phrased, "Whenever . . . then") is well adapted to express dependent relationships existing in reality. In the same form universal logical dependent relationships can be expressed naturally, as in the following: "If one grants that all roses have perfume, then one must admit that some perfume-giving beings are roses." Causal and premiss relationships are thus carefully differentiated. And yet the investigating judgment, which is concerned with proofs, has also a cogent bearing upon causal or any other dependent relationships which bind together real objects. When we know the causal relationship and the conditions which govern things, we have reason to expect a certain result from or among them with the greatest possible confidence.

Similarly, one must not overlook, said Aristotle, the careful scrutiny of reality when inductive conclusions are being built up. Granted that an investigator knew all men and were willing to overlook the differences existing among them in order to discover the universally essential characteristic of the genus "man," his critical tact would, of course, consider the gift of intelligence more important than such a matter as a prominent chin, even though this also is a racial characteristic. Moreover, in the real world the effectiveness of the inductive conclusion is lessened by the fact that a perfect process of induction is impossible. One never knows (Aristotle was obliged to admit) if a quality that seems to be generally present is actually universally inherent in a genus. Only ideal objects, such as those developed in mathematics, permit of complete and therefore self-evident conclusions, or axioms. Applied to the real world, inductive conclusions have therefore only the value of probable correctness. Aristotle, one realizes, was obviously prevented from completing his theory of induction by the fact that his age had not realized the character of experiment as the only dependable foundation for inductive processes. These still give the twentieth century plenty to do. On the other hand, Aristotle set forth, no doubt, everything of importance that can be said about the deductive conclusion—that is, the syllogism—even though some matters continued to need clarification and more detailed statement after his time. In the first, general sentence of such a conclusion, an object is described by a characteristic essential to it. Whether this sentence is an evident axiom or has been made satisfactorily probable by adequate inductive exploration, the emphasis is always laid upon that which is universal in the objects involved. Thus the object described is known through its "idea"—using the word in the Aristotelian sense.

The Syllogism

This discovery was to become very valuable later on in connection with the theory of knowledge. Induction reveals that which really happens to very many similar and essentially alike objects, and it concludes that this necessarily happens to all of them. Accordingly induction assists in the formation of first, general sentences in syllogisms. In the minor premiss an object known to be actual is named. Perhaps this reveals certain accidental characteristics not attributable universally to the objects designated in the inductive premiss. Nevertheless the newly known and still unfathomed object is similar and like in nature to the well-known objects first described. Logical tact will therefore consider the esoteric characteristics inconsequential, as not being sufficient to change the nature of the object; for comparative observation makes clearer how similar and like in nature the newly known thing is to those things already well-known. Now only the *determining* characteristic, which in the first premiss had been ascribed to all the objects indicated as necessarily inherent in the "idea" of them, and which was proved to belong to very many of them by a process of induction, is missing from the data about the newly known object. The particular premiss therefore goes on to attribute this *determining* characteristic to the new object. Now, independently of inductive observation, new data can be inferred: That which has happened to so many objects like it, will also happen to the newly known object. It cannot escape the experience of those things which are essentially similar to it. To it can be attributed as probable what is necessary to all. Countless men have died, and so we may conclude that all men will necessarily die. This is not a fact which has actually been observed in the cases of thousands of our neighbors, but still no one doubts it. All

men are mortal. That which is known is, therefore, recognized.

It required a magnificent reach of mind to work out in this fashion the basic notions of all scientific study of the world and to present them as universally binding judgments. Even the opponents of Aristotle must use his methods in attacking him. Today these methods are the common property of all intellectual workers. Perhaps that very fact explains why we so often forget what a marvellous act was brought to a close by this formulation of universal statements about all possible objects and relations in the cosmic reality we seek to know. Because every process of deduction reposes upon a broad foundation of experience, one can more easily overlook the systematic form of Aristotelian thinking than one can resist being dazzled by empty schematizations which have been constructed into systems.

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Concepts and Categories

The critical realism of the Stagirite identified the highest basic concepts of all investigation with the most comprehensive categories of reality. These categories (to his mind) are not mere theoretical figments of human reason. Nevertheless they are also not, as even Kant believed, gathered empirically. They are so *selected* that they conform adequately with the facts of observation. Their systematic connection is not so rigid that the tension between theoretical explanation and reality as such is rendered unbearable. Aristotle ascribes, in a pliant manner, to the thought-forms of reason their content most worth knowing, believing as he did that the object of all knowledge must remain getting insight into the *nature* of things. The "universal" judgment signifies, unartificially, ideative objects according to their genera, and takes into account the basic reality of the *matter*

of objects, the *substratum*, in which *potentiality* is marked. The "particular" judgment, in which investigation comes nearer to reality as such, has to do with the *kinds* of objects. In the real world this is tantamount to distinguishing objects according to their *form*. In actuality, then, it helps man to know the *properties* of things. Careful *observation* discovers, in the realm of abstract idea, the individual character of the exemplars, and in the sphere of reality, the not-to-be-repeated individuality of substances. The investigator, *concluding*, discovers the reasons according to which his judgments appear in their order—the connection of *cause and effect*, and the significance of *purposive* happening. It is easy to conclude from such a systematic statement what is to be the arrangement of the categories. Matter is formable (passive), quantitable, measurable and calculable in so far as it is substratum, and that which occupies *space*. Only formed substance is effective (active), and its properties are to be defined *qualitatively*, as *conditions* of things in *time*. The knowledge of all being must reckon with these first concepts. But they are arrived at last by the mind, because to conceive them is the highest achievement of logical abstraction.

Physics

This simple and fruitful definition of the fundamental concepts of reality enabled Aristotle to erect a magnificently comprehensive view of the world and to lay the foundations of a system of sciences. Physics began to be, taking for its material the facts supplied by observation and their unequivocal causal relationships. All phenomena it investigates happen inside of space and time with mechanical necessity. Mass and movement are its to measure. Thus the Aristotelian philosophy conserved all the advantages of earlier materialistic systems; and today it is seen to be in

substantial agreement with the Hertzian theory of mechanics, and to correspond even more fully with still newer theories. The Platonic attempt to explain away matter was superseded. Aristotle could not, it is true, tell what mass and force are in themselves—that is, apart from shape and movement. The question, we now see, was wrongly put. Matter is simply an *unknown* quality, different from everything else that is knowable. That does not, however, prevent its being understood unequivocally and sufficiently through the laws which govern its movement. The reason why matter must remain unknown is simply that wholly unformed and motionless matter does not exist. It is mere "potency," the possible basic stuff of things. It can be conceived of in thought, but it cannot be observed. Nobody can place a fragment of prime matter on a table, because formed prime matter is already an *element*. For this reason, and this reason only, prime matter in itself eludes investigation. But that which is foreign can be described indirectly and thus understood. Indeed, the power of thought lies primarily in the fact that it can deduce attributes from given data.

The materialistic atom-theory, it was believed, could explain everything by means of its concepts of mass and movement; and for a while the claim seemed justified. Aristotle, who grasped the fact that existing individual substances have already been determined by form, seemed for a long while to be championing an unnecessarily complex hypothesis. But since models of atoms have been created in twentieth-century laboratories, it is proved that the individuality of a real element is determined by the relationship of electron paths to one another and to a nucleus—that, then, the specific *atom form* is the individuality of the element. If this changes, then the individuality of the smallest material particle is changed, and the data of observation change as well. Moreover, grosser alterations in the character of the

relationships existing between atoms—alterations in stratification, for instance—change the data of observation. Chemistry investigates these alterations, which our word-usage terms "transmutations" of substances. Differentiations in the structural form are accompanied by changes in the qualities under observation. Not only in the case of crystals, but even in the cases of the most primitive elements, natural science must therefore reckon with the "forms" of matter.

Aristotle considered all events in the physical world bound together one with the other in causal relationship. In a world considered infinite (a Copernican world) the chain of causes also leads into infinity. In a definitely formed (Aristotelian) world, however, the chain of causes necessarily begins with a first cause, wholly consequent upon a Prime Mover. Of course this first cause must not be viewed as merely one among many but as the "cause of all causality." And the more the Copernican theory is supplanted by more modern hypotheses, the more weighty will the final metaphysical argument of Aristotle come to seem. And so his realism, which conceived of matter not as non-existent but as "that without which no [perceptible] thing can be," still helps to dispel the confusion of the idea of God and the idea of the world as expressed in pantheism.

The Sequence of Forms

Nor did the circumspect reasoning of Aristotle overlook varieties of dependency other than mechanical. He was concerned with cause and effect, but also with the relations between form and matter. And just as he visualized a chain of causes, so also did he conceive of a chain—a sequence—of forms. Marble, a material very fine in structure and therefore by no means formless, is nevertheless treated by the sculptor who wishes to impose upon it a higher art form

as "raw material." Common sense will realize the significance of the fact that Aristotle calls the art form more perfect than the marble-structure. The first has richer and more complex capabilities and possibilities than the second. In the same way, solid metal is of a "higher order" than fragile metal, the crystal transcends the clod, the living body capable of self-preservation and self-development is of a higher order than substances that are powerless to move and are set in motion by extrinsic forces. All phenomena of which inorganic matter is capable happen also to the living body, but here they are interwoven with processes the description of which requires wholly new definitions. Where life exists, the object of those who investigate it is no longer to discover quantitative movement and qualitative change, but to observe growth, procreation, sickness, age and death —all of which are experiences that never come to a machine. The living animal or plant body, like the forms of inorganic things, is of course bounded by space. Like other masses it is subject to the laws of impact and fall. But every detail of the living entity is determined by that which determines the whole, and every experience changes in part the condition of the whole. It is formed *from within.* The powers which regulate and guide everything done by the body, coordinate all developments and changes, as if a basic purpose were always being carried out by an intelligent soul. This "purpose" the body also bears within itself: it is this which preserves and develops not merely the individual but also the race.

Entelechy

One cannot assert by way of an objection that these directing forces are unknown. Certainly they are equally as unknown as prime matter or the forces of attraction and repulsion. This does not mean, however, that they cannot

be discerned or described. One must, of course, realize that the intelligence which dwells within a plant is not an actual reflective, reasoning intelligence; but one can think of it as potential intelligence of a certain kind—as what is implied by the term "psychoid." In this sense Aristotle ascribed to bodies indwelling self-purposes—called entelechies——and declared that the soul is the entelechy of the body. In this sense he ascribed to plants a "growth soul" —a soul which builds a body unto itself. A nobler plan is revealed by the animal body, the entelechy of which is a "sensitive soul"—a higher indwelling form. This body acts to fulfill definite though limited purposes, even if its acts are determined and not reasoned. Nevertheless an animal may after a primitive fashion modify in advance the natural effect of its action. Its deeds cannot be forecasted, according to unchangeable causal necessity, with the same certainty that solar eclipses can be predicted: one must always reckon with "why" an animal of a higher species is acting. The point is so obvious that only blind and peremptory philosophic theories could ignore it.

The human soul alone can lay out its plans far in advance, can itself reflect upon itself, and can ask questions about the activities of the spirit. It is, however, remarkable enough that the human soul does not reckon self-preservation and self-development (in the sense of growth) among the purposes which it consciously pursues. It takes cognizance of these only during hours of danger. But obviously human intelligence would in no case be skilful enough to control the mechanisms of the body. And that necessitates the thought that man is by no means entitled to declare that his is the highest intelligence.

Experience teaches that the light of consciousness burns steadily more brightly and alertly as one goes from the lowest animal to the most fully developed man. It would be

narrow and presumptive to assume that the cosmos of forms ends with what is the highest stage of development known to us. Humility and plausibility impel us to believe in the existence of more lofty souls. Therefore Aristotle, influenced by an older Pythagorean concept of the perfection of the world of stars, conceived of these possible more lofty souls as stellar spirits.

Just as the chain of causes, followed to its end, leads to a Prime Mover, so also does the steady sequence of forms bring us to the Highest Form. If matter is that which is unformed and of least worth, then pure form, the antithesis of matter, must be of the greatest worth. The perfectibility of power is dependent, however, upon the presence of more clarified intelligence. Therefore we conceive of the highest form as *pure intelligence.* Nothing of matter can inhere in it, if it be perfect. Nothing in it can be thought of as potency: all its boundless action must be wrought within itself, independently of space and time. Therefore the highest form is also necessarily *pure act.* To it the whole world is a thought it has realized:—it is the meaning of the world. It thinks and sees within itself, about itself, with the highest clarity, realizing also all purposes according to which life moves. If some one possessed the knowledge of all elements, all forms, all causes, all purposes, to him the existence of the perfect form might well be attributed. And though this exists in undisturbed rest, knowing itself and reading the world as an open book, the cosmos nevertheless develops and stirs solely for its sake. Its existence is therefore not merely the highest self-purpose, but the *purpose of all purposes.*

Just as it is not only the first cause, but verily the cause of all cause, so is it the former of all forms. Because of it all existing things take on goodly shape, in so far as the limitations of prime matter permit. Now the former of all beautiful forms, the thinker of all true thoughts, the

highest good of all purposes is—the Divinity. Thus with Aristotle there was completed the disentanglement of the ideas of God and of the world, which had at first been so chaotically confused. The "Perfect Being" and the real world were seen apart from each other. The riper and more extensive the experience of the investigator, the clearer and more perceptive the philosopher, the more impregnable becomes his conviction that God exists. The highly developed natural reason of Aristotle could prove this existence to his satisfaction. His calm and temperate ideas are commensurate with a world of vivid fulness, flaming beauty and greatness that demands veneration.

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Aristotle's Psychology

Aristotle, then, was an incomparable artist in his application of crystal-clear ideas to a reality vividly and passionately alive. In the same spirit he avoided thinking of psychic events as a stream of experience flowing past wholly without connection with an outer world. Indeed, while analyzing such varieties of human experience as could not be traced to their beginnings, he was mindful of their function in the process of knowing the physical world, or in the process of action which has an effect upon this world. His sharp observation and his intelligence, which depth did not distort, preserved him from all reckless guesses. He would never have been capable of saying that mental experience is movement. He did not talk of "psychic content" and then forget to ask, "content in whom?" When he spoke of the soul's actions, he bore in mind *whose* actions they might be. He saw that all inner experience is coördinated in a peculiarly intimate manner. There is a definite unity and simplicity which knits together all psychic contents and occur-

rences. These are always the experiences of some one and the same soul. Without this preconception all psychology would be a hopeless muddle; with it, psychology is luminous.

Experiences and functions are often qualities which one can express directly. Beyond that, however, they contribute to the formation of relationships which must be unraveled. Perceptions, for instance, are easily recognized as colorful or noisy or odorous. The thing worth knowing about them, however, is that they indicate, in varying ways, properties of *things*. Excitations of psychic conditions, of course, accompany these perceptions. That is what lends strength to the objections raised by Protagoras against sensory knowledge. But regardless of how body and soul may *modify* impressions received, there is no proof against the assumption that the properties of objects and their parts display at least a remote similarity to the qualities revealed in perception. The fact that one cannot calculate and measure such qualitatively known properties prevents the physicist from concerning himself with them; but his abstention does not prove their non-existence. To say "the leaf is green" involves no contradiction or logical error, no omission of comparison with what has been observed. Indeed, it is more worthy of acceptance than the statement, "the green is mine." If it is objected that color is dependent upon sunlight, the answer may be that growth also depends on sunlight. If opinions about qualities are contradictory, the conclusion cannot be that *all* such opinions are subjective. Perhaps only *some* are based on error. Perhaps no eye sees the tint of actual green, but rather always tints which are in one way or another related to green. At any rate, our senses convey knowledge not merely of experiences and bodily movements, but also, to a limited extent, of the texture of the material world.

The Unity of Personality

The repudiation of the senses by pure speculation, or by the hypotheses of nature investigation, was thus very well circumvented by Aristotle, without laming freedom of thought by a blind reliance upon sense knowledge. In the same manner he avoided describing the fleeting pictures of memory as mere purports, and staking everything on testing their association one with the other. He saw that without recollection of past times and things no experience or knowledge of the world would be possible; and he realized that if there were no memory the unity of personality could not be observed. The psychical image of an object can be extricated from the complex of memory. It then takes its place in a new series of images which is the *product* of inventive or artistic thinking. In the mirage induced by certain emotional conditions or by lonely dreaming appear those phantom pageants which, though similar to the world of reality, nevertheless pertain to a world all their own—which are always more profound than they appear to be on the surface, being loosely strung together and needing no other thing, revealing the whole in every part, beautiful creations stamped with the earmark of the personality which fashioned them. Thus, despite his readiness to call sensory or imaginative experience real, Aristotle did not vaporize the soul's life into a system of pictures or images. He saw too clearly the triumphant individuality of thought, which can direct its attention to matters beyond consciousness with the same power with which it can adjudge conscious experience. Only the rational soul—on earth, only the human soul—can observe its own acts, voluntarily direct its attention to this thing or that, critically appraise its own deeds, observe its own feelings, and examine its own knowledge and opinions. Many objects and relations, which it

adjudges, it accepts as they are, simply *observing* them with an alert intelligence. But this process alone would not transform rational reflection into scientific knowledge. It is necessary personally to *establish* relations, to make an orderly *arrangement* of objects, to *isolate* qualities selectively, and with an active spirit to view the stuff of experience, form it creatively, and then truthfully present it. It is not necessary that all the accepted experience be constantly the object of concentrated attention. Seen simply as material which may be explained by attentive study, this experience has, by reason of its structure, a definite effect upon system and order as arranged by reason.

The idea that happenings of which one remains unconscious may serve as the materials of the perceptive and formative attention is one of the most profound principles of Aristotelian psychology. These happenings are the result of the fact that the soul has retracted itself from its environment. The act of volition, however, is not to be deduced from them, because the effect of such an act is to change environment. The instincts, as they determine animal existence, are also in the case of man only possible motivations of conduct. Reflective volitional decisions are those which are chosen and determined upon for a motive. Human will is a resolve in which the whole responsible personality is expressed. This personality observes the goals of desire, weighs their value, and notices their effect. The motives flood in upon the personality, which is able to control desires in accordance with reason and so to arrive at self-control and freedom without subjecting itself to the slavery of habits. Therefore the "character" is never merely one motive among many. Its ethical task, its carefully thought-out wish, is to develop its nature. That which man is to realize is not the mean potency of his animal nature but his real being—reason. The race of men "who are respon-

sible for their actions" share in this possession of reason. Therefore the ethical goals of all personalities may be summed together, without doing violence to the development of individuality and without forgetting the obvious limitations of endowments which are sometimes greater, sometimes smaller. Every person finds the happiness which it is possible for him to attain in the act of living according to his reflective and temperate human nature. The tact of the wise finds the golden mean between "too much" and "too little." The virtues of men and women are not the same, but the one set completes the other.

The State

Admittedly this ethical ideal can be realized (said Aristotle) only in a civic order in which those capable of assuming responsibility govern those less able to bear that burden. It therefore depends upon the condition of men and upon the peculiarities of people which form of government is best suited to them. Any and every concept of the state can lead astray if government fails to live up to its proper responsibility. A ruler who need render an account to no one becomes a tyrant, and a democracy incapable of exercising judgment turns into a mob. In both cases revolution is sure to set in. And where this extreme measure is not resorted to, there is an inevitable separation between the governing minds and the crowd that is led. This crowd, which normally supports ideas that seem to harmonize with the time, is always tending to condemn and overthrow; and the "great man," unflinching in the dedication of his will to an idea, to realize which his whole being pulsates, is forever in danger of downfall. That is amply proved by history. But the lot of the "great man" is portrayed still more graphically and directly in tragic art, which awakens fear and pity.

Poetics

Aristotle thus became the founder of æsthetics as a special science. He contemplated masterpieces according to content, form and means of expression. In all three high art deflects from nature, isolating that which is essential and casting aside that which is not. Tragedy idealizes characters by magnifying their gifts and will power; form, by concentrating events into a compact area of space and time; means of expression, through the use of noble diction. The means of expression reveal their full loveliness only when there is effective visualization of the entire artistic subject and complete control over the structural form. Contemplation of the tragic work softens even aweful impressions, by making it seem that the passions aroused live in the work itself rather than in the spectator. In his treatise on tragic art (fortunately preserved) Aristotle proves particularly his extraordinary familiarity with the life of the stage; and his remarks concerning technique and direction are uncommonly fine. He said things about the basic idea, the plot and the characters which only the greatest dramatists have fully comprehended. The characters unceasingly carry the easily retainable story to a finale, but necessarily unfold themselves meanwhile. One speaks of a character (in the Aristotelian sense) only when there is someone who manifests a trend of will; and therefore all speeches are undramatic in which there is not expressed what someone plans to achieve or to avoid. Here, indeed, is clear insight put into the simplest language! Every action serves the attainment of the final goal, but at the end every part of the action is clearly to be seen as an indispensable portion of the whole. Thereby the action is almost automatically made to seem probable. Nothing has been wasted.

In every work of art there is active a principle which be-

longs to man's deeper nature. Art is, as a consequence, experienced as a picture of the meaning of the world. The guilt of the tragic hero rests not so much upon a single deed as upon his individuality. He need not be distinguished either through especial virtue or uprightness, nor does he plunge into ruin by reason of meanness or malice; but he meets disaster because of a particular fault of character peculiar to him, and so typifies prominent men of noble epochs. The tragic finale (Aristotle remarked) must not be softened out of deference to the spectators, because these would then not be purified by the exalted destiny portrayed to them, but would remain enmeshed in sentimental fancies. Only when sorrow is seen as essentially an attribute of human nature can it really be visualized. On the other hand, the tragic impression cannot be conveyed through mere scenes of terror, for these lead only to worthless bitter moods. Aristotle was, as may be seen at this point, quite as conversant with the psychology of the spectator as with the experience of the active artist. He knew the fearful, almost hallucinatory moments of ecstasy during which the vision sweeps before the creative mind—moments which necessarily accompany the birth of all great and beautiful art. Such, then, was the doctrine of this vast and wise thinker whose poetic dialogues, lost to us now, were placed by the ancients on a level with those of Plato. The tragic lot was not spared him. At the close of his life he fled from Athens to avoid the fate of Socrates. But neither the disfavor of Alexander nor the anger of the Athenian democracy could rob him of his dearest possession—the peace of the knowledge of God.

CHAPTER III

THE PHILOSOPHY OF WISDOM

1. The Ethics of Pleasure

Sophistic doubt and Socratic irony robbed an overripe Attic culture of its appetite for theoretical investigation for knowledge's sake. Even prior to the completion of the Aristotelian system many Greek thinkers had turned to the consideration of ethical problems imposed by the needs of the hour. People began to reason less about being and more about wisdom and the highest good of life. In fact, the whole of Hellenic humanity was dreaming of the ideal wise man. The unquenchable desire for peace of soul was astir in the ancient world. Democritos had praised the spiritual calm of the nature student; Plato had derived a passionate bliss of soul from meditative enthusiasm; and Aristotle had found peace of heart in the temperate, reflective knowledge of God and the world.

On the other hand it was inevitable that the hands of cruder thinkers should, as it were, attempt to catch hold of happiness by the hair. Observe the gently reared, amiable and pleasure-loving worldlings of the most select Athenian society. Trained by Sophists, they are no longer sufficiently naïve to plunge themselves thoughtlessly into the joys of possession and good living. Their thoughts, aroused, are directed to the knowledge of the good—or more concretely, the good things of this world. Socrates had taught that only the wise man can tell what is good; Aristippus of Cyrene [1]

[1] Aristippus, of Cyrene (in Africa) was born about 435 B.C. He was a disciple of Socrates, a great traveller, and something of a Bohemian.

declared it much more worth while to determine what was enjoyable to the palate and becoming to the person. This praise of pleasure seems hearty enough, but a subtly ascertained pleasure is really not a blossoming joy in life. Happiness weighed in advance blenches the cheek and destroys enjoyment. A palate which is not natural is easily satiated.

The Cyrenaics

This Cyrenaicism was the philosophy of late Roman society and of declining Athens. The history of its ethics is heavy with experience of the vanity of earthly joys, and in the end it repudiated itself. The honesty of its reasoning guarantees the lasting significance of the school of Aristippus. His son and disciple arrived at the following pertinent conclusion: only a pleasure which I control is worth while; if the pleasure controls me, it renders me unhappy. This is certainly true even of the innocent joys of existence. But at this point the philosophy of pleasure—called Hedonism—had already taken a trend towards Stoic doctrine. Two of the later Cyrenaic teachers—Theodorus and Euemeros—realized that more profound reflection concerning cosmic realities clouds the wild delirium of pleasure. It was their opinion that the wise man must, therefore, rid himself of belief in God and explain away the reproaches of conscience with as much cleverness as philosophy can muster. Nevertheless their shouts of gayety were muffled, and Theodorus had resigned himself to accepting the cult of cheerfulness. Amnikeris praised, in contrast with loud and indecorous feasting, the bliss of friendship, of gratitude, and of intellectual enjoyment.

Hegesias,[2] the most gifted of the Hedonistic moralists, completely dissolved the optimistic assumptions of Aristip-

[2] Hegesias, so the authorities tell us, "flourished about 300 B.C."

pus. He also considered pleasure and the joy of living the highest good—that which is yearned for by natural desire. But experience shows, he said, how unattainable this good is. The overwhelming majority lack the means to be comfortable; many of the wealthy are not robust enough to sustain unrestrained lust; and therefore he who pursues happiness will be wise if he departs early from this life. So impressively did Hegesias teach this doctrine that people called him an "attorney for death." But in his own way he arrived at the relative wisdom of the Buddhist philosophy, though in a wholly different manner. The struggle for earthly happiness is unsuccessful, he concluded, and wise men discontinue it. The advice to commit suicide is the thoroughly logical consequence of the false assumption that the pleasures of this world are the highest good. One might add to it that no conception of man and earth would be more harrowingly depressing than that of a herd of pleasure-seeking pigs drowning in the surplus of satiety.

Epicurus

The Hedonistic illusion is, however, as firmly rooted as the desire for happiness is native to the human heart. It is everywhere the secretly entertained philosophy of those who happen to be the upper ten thousand. As such it lasted through the Hellenic centuries, and as a current of thought was associated with the name of Epicurus.[3] This man, wholly insignificant as a theoretic philosopher, attempted to walk in the footsteps of Democritos; but because he lacked

[3] Epicurus (342-270 B.C.) was born on the island of Samos, studied some philosophy, and later established a kind of "seat of learning" in an Athenian garden. What we know of his doctrine is chiefly derived from the books of later Roman philosophers like Seneca. For some reflections on the doctrine of Epicureanism, see Walter Pater's *Marius the Epicurean;* Santayana's *Three Philosophical Poets;* and Kreibig's *Epicurus.*

the original gift for nature-study which had distinguished his avowed master, he became the prototype of fluent materialists. These gather from second-hand sources a narrow education in physical sciences and use their pleasing graces as writers in spreading, with some charm and a little wit, their remarkable "enlightenment." Epicurus in no way understood Democritos' doctrine of logic, which said that objects known to the senses might be interpreted by thought approximating to reality. According to his (sensualistic) theory, the senses *themselves* perceive the reality of the external world. Quite as plumply his philosophy—which was preeminently that of urbane society—accepted every late theory in physics, every preliminary description of phenomena that was only an elementary approximation to reality, as the final statement of metaphysics. And since, therefore, the Epicurean system misinterpreted the permanently fruitful discernment of Democritos, it was necessarily even less able to comprehend his one-sided and negative teachings. The denial of Providence, soul and freedom provided this variety of propaganda with inexhaustible material for declamations about "superstitions" which bar the road to pleasure. First, it treated the atoms as if they were visible crumbs of something or other, and then it divided the soul into atoms. Then, in order to prove its ignorance of physics also, it ascribed to these atoms,—which move by their definition in a mechanical world according to inviolable laws,—occasional, accidental, eddy-producing departures from their normal paths! These were then compared to the decisions of the will. A sketch of this philosophy of demi-culture is necessary only because it perennially comes back true to type, whenever mankind rests from the effort of metaphysical thinking.

The ethics of Epicureanism is devoted to a computation of the passions. A friendly group of worldly people (a

society for the promotion of monism), the members of which were personally charming but not emaciated by earnest thought, came together in the gardens of the wealthy for conversation. The sensibility of these super-civilized persons reserved one pleasure for the day and another for the night, provided the house physician raised no objections. This chilly hearted calculation of enjoyment preferred leisurely, careful, nibbling comfort to the rough joviality of more healthy eras. Instead of divorce by law, the system accepted the pale, tired happiness of painlessness, and then proceeded to term its cleverness a virtue. To the measured and scientifically prepared pleasures of the body, the Epicurean added also the joys of the spirit, stipulating that no exertion must be required. The anticipation of pleasure and its remembrance thus became the sources of spiritual contentment. All honest passion was flung to the winds. Coldly and calmly the Epicureans built walls round their gardens so that the sight of the misery and suffering outside might be hidden from view. The philistine Roman poet, Lucretius Caro,[4] poured this thin wisdom into austere hexameters.

2. The Philosophy of Self-Control

The Cynics

Rough and ready spokesmen for the pauperized citizenry of Athens heaped sarcasm upon the prosperous happiness of the fortunate. The weapons of Sophistic dialectic served them well. They also were in search of a natural form of living and cared little for institutions. But to them the manifold requirements of the rich, even culture as a whole, seemed against the grain of nature. They sought virtue and the bliss of knowledge. But reflection told them that he is happy who has no desire, and that he will have the smallest number of desires who needs the least to exist on.

[4] Lucretius Caro (99-55 B.C.) was the author of *De Rerum Natura.*

Antisthenes [5] and Diogenes [6] therefore praised the man who required nothing, who satisfied only the most elementary demands of nature. All the things custom had established—marriage and the state, honor and wealth—impose only care and are evil. Among these things is theoretical learning. Here again the ideal of poverty as expressed by Indian wisdom was preached, but without the great splendor that came from the depths of Indian thought. The Cynics (as this group was called), did not live a life of sublime renouncement, but rather a self-satisfied dog's life.

The Stoics

They are thus the forerunners of an ethical-religious movement with which the Hellenic genius properly ended—

[5] Antisthenes, who was born about 450 B.C., came of comparatively humble Athenian parentage, but was educated to be a rhetorician and later became a philosopher. To some extent he was influenced by the Sophists, notably Gorgias, but he became a deep admirer of Socrates and a friend of Plato. He is dealt with in the *Symposium.* The school of thought founded by Antisthenes was called Cynic, probably because of the name of the building in which its sessions were conducted. See Gomperz, *Greek Thinkers.*

[6] Diogenes, who died in 323 B.C., is perhaps the most widely remembered of the Cynic philosophers. His life was characterized by numerous adventures, which doubtless had their influence upon his point of view. When his banker father was convicted of having debased the coinage, Diogenes left his native Sinope and journeyed to Athens. There he attached himself to Antisthenes, though he was at first intensely disliked by that philosopher. Soon Diogenes was famous—if unpopular—as the scourge of complacent citizens, as the critic of pretentious ignorance, and as an exponent of the simple life. In lieu of any other residence, he once took up his abode in a huge jar in the market-place; and there he preached not so much asceticism for its own sake as contempt for ordinary men. Later on he was sold into slavery and then ransomed. It is said that he once met Alexander the Great and answered that conqueror's offer of assistance by saying, "Get out of the sun." Diogenes was, of course, a practical moralist; and in so far as we are aware, he did not attempt to distinguish himself in that literary art which he held in scorn.

the Stoic movement.[7] During five centuries the ideas of Zeno [8] and Cleanthes,[9] which Chrysippos [10] popularized in an extensive literature, wielded enormous influence, especially because their ethics of the "brave soldier" agreed with the blunt Roman character. The Stoic power over human hearts is not, however limited to the Roman centuries, for the reason that Stoicism (like Epicureanism, though in a nobler way) gave expression to certain profound spiritual needs of mankind. Today the "English gentleman" still illustrates the Stoic code. Ideas bearing on the philosophy of law and history were developed and deepened by men of the world like Panaitius,[11] Posidonius and Cicero. In the end Stoic philosophy realized that self-control was quite as much beyond the reach of the individual powers of the natural man as was happiness. Seneca, Epictetus and Marcus Aurelius summoned the aid of the gods.

Stoic Psychology

On the plane of theoretical investigation, the Stoic achievement is also superior to that of the Epicureans. It

[7] The Stoics began to be known about the beginning of the third century, B.C. They were derived from the Cynics, but expressed somewhat more fully the ideals of Socrates. The name has in origin in the Greek "Stoa Poecile" or "painted porch" in which Zeno, the founder of the movement, held forth. Information of relative interest is supplied by such books as W. L. Davidson's *The Stoic Creed,* E. V. Arnold's *Roman Stoicism,* and the previously mentioned Pater's *Marius the Epicurean.*

[8] Zeno, of whose life we know very little, was born on the Isle of Cyprus and is said to have lived long. He seems to have been held in great regard and to have written a number of books.

[9] Cleanthes, a disciple of Zeno, died in 220 B.C. His "Hymn to Zeus" is the only important early Stoic treatise to have survived, and is notable for its discourse on God, which emphasizes the Divine unity and omnipotence.

[10] Chrysippos, who lived from 280 to 207 B.C., modified the Stoic code considerably. He is considered the "second founder" of Stoicism.

[11] Panaitius introduced Stoicism to Rome; Posidonius taught it in Syria; and Cicero supported it in some of his treatises.

took a particular interest in psychological analysis. Processes of idealistic theorizing captivated, as one can easily understand, the Stoic sage. To his mind bare reality is, strictly speaking, never exactly the same as the opinions one accepts, for these are based on an approximate conceptual representation,—on what is termed the "ideate." This can be accurately reflected in the "idea" formed but is not immediately perceptible to observation. Nevertheless the imagination, continuous and condensing, divining and reconstructing, simplifying and inventing, creates visual representations which support the idea. Such representations of the "ideate" are a kind of intermediate common property. They are not themselves concepts, because they *take the place* of the object designated while judgments *interpret* the object. But often in a surprising manner judgments can be deduced from the representations (or the ideates). In the discovery of new truth, therefore, the representative visualization is often in advance of the judgment. This plump confusion of "ideate" and idea was circumvented by the Stoics through their notion of formation (an "ideate" is formed) and of assent. They rendered a real service to logic by contrasting assent and dissent with affirmation and negation, as these enter into judgment:—for one can assent to negative judgments and dissent from affirmative judgments. Assent is, in Stoic logic, the final reasoning act of the entire personality. Many probable solutions can be thought out and accepted in a preliminary way, and then only does the decisive act of agreement become unavoidable. If an "ideate" can be followed throughout its whole process of formation, then the judgment referring to it will be assented to because it is evident. In a different direction, assent is also (according to Stoic teaching) the last inner act prior to resolution. It implies, quite in the same way as the choice of opinion, coöperation of the will.

Stoic Ethics

Stoic ethics classified all events into two groups: those which depend upon our consent, and those which are not affected by either our consent or our repudiation. Destiny comprises a summary of the latter, and should not either be praised or lamented by the sage. Only a fool would be overwhelmed by that which he can neither avoid nor be held responsible for. He who takes the changing circumstances of destiny seriously, as being either really good or bad, will forever be subjected to the passions of fear and anger. He will permit himself to be regulated from without, when he might commendably remain firm. The passions lead not only to foolish resolves, but they also cloud judgment. On the other hand the wisdom of the sage clarifies the soul and permits it to bear good and evil days with equanimity.[12] The powers of the soul obey the guiding will in different degrees. Thoughts obey docilely enough; their effect is immediate only upon the noble temperament, but gradually their influence clearly sways all men. One can easily control the phantasms that come in meditation, and by weaving them into the forms of model ideals one can strengthen the power of self-control. Emotional life also will sooner or later serve the strong will of the sage, and then his decisions will conform to his principles. Powerless desire can ultimately be made to give way to unflinching determination. Cool deliberation will rob the passionately welling up instincts and impulses of their motivating power. A life well planned finally results from the philosophy of reason. This reason, however, also dictates the welfare of the community. Stern Stoics declared all fools guilty of passion and declared that only the wise man was virtuous. Exterior goods were, however, of indifferent value to them. One accepted these, but

[12] Acquam memento rebus in arduis servare mentem.

one was not victimized by them and used them temperately. Milder Stoics admitted that there were goods which must be shunned and goods which were desirable. Health, riches and honor were desirable, but those who lost them were urged not to mourn. Danger and death were to be shunned, but the fool alone would fear them. If a sage felt sure his courage would not suffice to endure a certain approaching misery, voluntary death was permitted him. Proper action, said the Stoic, does not consist of external gestures; but the heart must be purified and the reigning intelligence must have no rival.

Rome

The Stoic movement spread beyond the boundaries of Athens and Italy, and the community of reason it sought to serve was nothing short of mankind. This ideal of "citizenship in the world" was then gradually changed into the imperialistic ideal of the Roman world empire. The hard and sharply defined ethical system served, therefore, the development of the principles of law. The sage (it was taught) lives and works in accordance with nature. By natural right man has a claim to the means of subsistence, to civic protection, to honor and respect as a citizen. Law establishes that which is worth establishing, and does not lose itself in Sophistic casuistry about the value and origin of custom. This law shall, in principle, not be confined within the boundaries of any state, but shall become the law of all peoples, guaranteed by the majestic power of the world empire. Such a growth of a reasonable order in the world, the final victory of the power of reason over error and passion, can only be hoped for, however, if the fortunes of mankind are governed by a ruling cosmic intelligence, by a providential power. In pantheistic fashion, the early Stoics conceived of human reason as a scattered spark of a ruling cosmic

intelligence. He was virtuous who acted in accord with the cosmic reason; he was sinful and foolish who opposed it passionately. For even if, they declared, it lay within the power of a limited reason to decide against or oppose Providence, the success and effect of the resolve would nevertheless be determined by the might of the vast cosmic reason. Therefore the rebel against Providence was to them always a soul which had been conquered or unbalanced by passion. He who wished to be free, they counseled, let him reckon according to the desire of God, and for the sake of such freedom let the soul defend itself against the motives of passion. Nevertheless it is clear that this far-seeing doctrine of freedom cannot be reconciled with pantheism. If only the one Cosmic Reason is the fountain-head of all resolution, and if the human soul is a spark of its fire, then it is impossible to find a beginning of the rebellion. Only when one accepts the human soul as the *creature* of a God controlling destiny and donating the power of free decision, is it possible to think of the Stoic reasoning as consecutively logical. Then, however, rebellion becomes actual sin. And when Stoic doctrine had attained its final form, it recognized this fact and developed it.

Cicero's [13] philosophy of law, Vergil's [14] concept of history and the piety of Epictetus [15] are the milestones of the constantly deepening Stoical doctrine. Stoicism learned by experience the impossibility of its program of self-salvation. Even so noble a ruler as Marcus Aurelius [16] was not able to

[13] Cicero (146-43 B.C.), the greatest of Roman orators, outlined a philosophy of law in his *De Officiis, De Finibus* and *De Republica.*

[14] Vergil (*Publius Vergilus Maro*) lived from 70-19 B.C. His *Aeneid* is, in a fashion, something like a Stoic philosophy of history.

[15] Epictetus, who lived during the first century A.D., was a slave who was later manumitted. He was the author of maxims, or discourses, ethical in character. See Arnold's *Roman Stoicism.*

[16] Marcus Aurelius Antoninus (121-180 A.D.) was a Roman emperor and the author of a great volume of maxims.

win a victory over the world with this philosophy. Seneca saw no way out of misery but the final expedient of opened veins. In the face of such testimony the last Stoics conceded that the sage stood in need of help. They took refuge in a simple Socratic confidence in the mercy of God to whom they offered clean hearts. The cry for salvation, breaking through their lips, is even yet arresting. We see how they found out that man, of his own power, is unable to attain unaltering peace of heart or to overcome the world. Antiquity as a whole had sought for the supernatural source of knowledge and for strength to live; but all its philosophic systems did not give it an answer in which there was the needed comfort.

3. The Epoch of Doubt [17]

Platonic and Aristotelian tradition, Stoic and Epicurean schools—these all fought one another and put forward equal claims to the truth. Without making a really thorough investigation, the Skeptics concluded that truth cannot be arrived at. At least, they declared, other critics of truth had not met with unanimous approval, for all the earnestness of their efforts. Because their historical consideration of the battle about views of life clearly showed that it had been bitter and still raged, the argument of the Skeptics was

[17] The term "Skeptic" originally meant "enquirer." It is applied primarily to those who represented the Sophist reaction to the philosophies of Socrates, Plato and Aristotle. Gorgias, whom we have met as a nihilistic Sophist, was probably the most important teacher to have aligned himself with the Skeptic position. Pyrrho was, however, probably the first to adopt the name and to establish a "skeptical" school. He taught that things are inaccessible to human knowledge. Timon, his pupil, seems to have been a clever fellow who drew the conclusion that one must be skeptical even as regards skepticism. Ainesidemos elaborated ten reasons for skepticism, which he called tropes. His is, perhaps, the most carefully reasoned argument for the skeptical position. Agrippa and Sextus Empiricus were other noted representatives of the movement.

in all reality overwhelming enough. We must observe, however, that the declaration "there has been an incessant struggle to attain truth" is too sharply determined to be the utterance of genuine skepticism. What matters is the impression this declaration gives—"philosophic war is unavoidable." That urges the lover of peace to refrain from thought. And the Skeptics, like the Hellenic mind generally, sought peace of soul. They fancied that abstention from philosophic judgment would bring it. Their object was not the spirited banter of highly talented and arrogant minds; nevertheless the reasons they gave for the unattainableness of knowledge are quite the same as those of the Sophists. What Gorgias declaimed with arrogant gesture, Pyrrho may have developed with perfect calm and Timon have put into irreverent verse. The basic essentials of the Skeptic position are practically the same whether one looks for them in the detailed explanation of Ainesidemos, the more gripping statement of Agrippa, or in the modest account of Sextus Empiricus.

The Skeptic taught by means of "tropes" which hardly seem as convincing now as they once did. Here are examples:

The "Tropes"

1. "Different living beings have different qualities of sensation and so derive different impressions from the same objects." That is partly correct. But one must not overlook matter common to perception, which abides in all instances. If a surface seems blue to one person and grey to another, it is nevertheless seen by both as a surface. The divergent opinions can be examined and one found wrong.
2. "Different people are differently capable of sensation, and make variant mistakes in observation." This is

true, but is practically negligible since psychology has been able to measure capacity of sensation—since for instance, the Gauss error-graph has come into use.

3. "Correctness of observation varies with the same observer from time to time." That can be counteracted by increasing the number of observations and by exercising methods of control.
4. "Observation varies with physical conditions." That is, of course, why variations exist, but it does not by any means render knowledge impossible. One can reckon with physical conditions.
5. "According to the position of objects in space their appearance changes." Yes, but we can know all forms of perspective determining the basic form.
6. "Media like light-rays and bodily movement prevent a direct perception of things in themselves." Certainly; but that does not hinder one from setting down the facts of observation in their order and determining the relations between them according to the Democritan principle of *salvare apparentia.* Many of the hypotheses concerning the structure of objects thus arrived at have the highest possible verisimilitude; and with that one may reasonably be content.
7. "The Object suffers a change of its conditions." That is not a difficulty, but rather a matter of knowledge. The skeptic ignorantly believes that when a thing alters, the notion of the thing must alter too. This obviously is not necessary, and is allowed for by the very idea of change.
8. "Every syllogistic conclusion leads into the infinite with its proof, because both premises must in their turn be deduced from others." Even if one refrains from noting the axioms of the ideal sciences, judgments concerning the facts of observation are often utilizable as

premises. Moreover the skeptic knows nothing of empiric induction.

9. "The judgments of men differ according to their characters and inherited traits." To counteract that, self-training operates with some success; and the skeptics' argument is the very reason why a "psychology of conviction" exists.
10. "The opposite of every opinion can be proved." This is a blandly Sophistic declamation, the burden for the proof of which rests upon the speaker. At least in the case of the ideal sciences (for instance theoretical mechanics) it is clearly false.

The Skeptical Conclusion

As a consequence of all this Arcesilaus [18] was quite right in teaching, consistent skeptic as he was, that we must doubt the correctness of the statement that we can know nothing. It should be added that it would be unjust to suppose that the skeptics were satisfied with multiplying "tropes." Most of the adherents of this school were sensible students of nature and many of them were doctors. They simply realized that the theories of the exact sciences are acceptable when taken as approximately correct hypotheses, that they continue to need refinement and proof, and that in the strict sense they have only the value of probable correctness whenever one tries to apply them to the real world. The indubitable service of the skeptics was to have constructed the doctrine of probability.

This fine and accurate teaching does not, however, suffice to explain the significance of the skeptical school in the history of thought. Voicing the feeling of a whole age, Skep-

[18] Arcesilaus, the leader of what is termed the "Middle Academy," was a somewhat more reasonable sage than the others associated with the Skeptic name. He lived from 216 to 241 B.C.

ticism despaired of hoping that the riddle of the universe could be solved by the power of man alone. Antiquity taught by Greece had worked out the great possible solutions of metaphysics—the systems of materialism, idealism and critical realism—and the ethics of pleasure and duty. It had not succeeded in choosing between these solutions. Skepticism therefore, pointed out the mystery which underlies the world. Antiquity then set its final hope upon religion, and here also carried on the search primarily with its own resources.

CHAPTER IV

THE MYSTICAL PHILOSOPHY OF REDEMPTION: NEO-PLATONISM

The men of antiquity had seasoned too highly the cup of pleasure; and so in the end they threw the cup away. Stoic power of will was not strong enough to hold its ground against fate; and Skepticism announced the collapse of philosophy in the face of the world's riddle. Then an unparalleled religious longing summoned from the deep all the wraiths of myth. But soon it was discovered that the need for something to adore was not satisfied by wide Olympus, and could not be stilled at the altars of Egypt or Asia Minor. The world was trying to find the figure of a redeemer. The mysteries of Eleusis promised beatitude to the pure who ate the food of Ceres. Kybele, the Asiatic all-mother, invited mankind to orgies of intoxication. Dionysius and the sacrificed son of Isis promised even more enchantment. The ethical religion of the Persian Zarathustra,[1] who had found light good and darkness evil, cen-

[1] Zarathustra (often spelled Zoroaster) was a great Persian religious teacher, whose birth is usually supposed to have occurred about 660 B. C. He seems to have traveled widely and to have won over all Iran to his teaching. This asserts that a constant warfare is taking place between the two principles of good and evil active in this world, but that the good will triumph in the end. The will of man was conceived of as the agent to bring about this victory. Zarathustra elaborated a vast mythology, a code of ethics, and a theory of history. See A. V. W. Jackson, *Zoroaster, the Prophet of Ancient Iran* and the same authors' *Persia Past and Present.* Marion Crawford's novel, *Zoroaster,* is a pleasant imaginative introduction to the matter.

tered round the attractive cult of Mithra, son of Light. That through the knowledge of Atman one might obtain redemption was the most popular teaching of Indian wisdom. The Jewish hope for a Messiah won disciples. Greek poets placed the newest doctrines of hybrid religions upon the lips of deified teachers who had lived during a long since buried antiquity. Theosophic prophets, notably the legendary Apollonius of Tyana,[2] appeared everywhere and were honored by their friends as redeemers of the world.

Philo of Alexandria

Jews affected by Greek culture began to employ haltingly and experimentally the logical methods of Greek thought in order to achieve philosophic clarification and presentation of the contents of the Old Testament. Aristibulus [3] cited Orpheus, Homer and Hesiod along with the Prophets; Philo [4]

[2] Apollonius of Tyana, a magician, lived during the reign of the Emperor Nero. He seems to have adhered to the Pythagorean school of thought and to have traveled widely. Tales of the wonders performed by him are most beguiling and curious, but they probably cannot be accepted as historically accurate. If they be trusted, Apollonius deserves to be termed a marvelous magician. He did, however, profess to foretell the future.

[3] Aristibulus (181-145 B.C.) was an Alexandrian Jew who wrote a work on the Pentatauch which attempted to prove the indebtedness of Greek sages to the Hebrew Bible.

[4] Philo, born about 25 B.C., was surnamed "Judaeus" or "the Jew." He was a wealthy member of the Jewish colony in Alexandria, Egypt, was well versed in the Septuagint Old Testament, and seems to have practiced his religion in the orthodox manner. Acquaintance with Greek philosophy encouraged him to develop certain allegorical interpretations of Scriptural teachings. In the portion of his writings which deals with ethics, or laws, he is faithful to the strict Hebraic tradition. In his treatment of creation, however, he becomes what we should now term theosophic. God is goodness. He comprehends the material world, but is so far superior to it that it has no contact with Him. Therefore there is need of an "intermediate" creation. This is comprised of the ideas, which are also real beings—angels. All these are comprised in the "Logos" as his essence. Man is a creature of the "Logos" and

of Alexandria quoted the great classical thinkers. In the light of belief in God, the nebulous mythology of Plato gained a clearly defined plastic character. According to Philo, not men but supernatural spirits see the ideas of God in their original purity. The angelic choirs behold the attributes of Divinity, thus for the first time making them objects of spiritual comprehension, and then, as a consequence, endow them with power to have an effect upon prophetic men and upon the course of history. The Stoic doctrine of "cosmic intelligence" had been susceptible of far too many interpretations; Philo's concept of the "Logos" completed it, teaching *a revealing God through whom God to be revealed is made known.* "Logos" was further defined by Philo as the eternal high priest and Messiah. Nevertheless the doctrine of this contemporary of Christ remained full of contradictions and darknesses, and was still very much like Plato's concept of the World-Soul. It illustrated, however, the fact that mystical anticipation was approaching more and more closely to the truth that was to be made real by Christ. But the "Eternal Light" did not triumph in an instant. Heathenism still sought (as had India) salvation of self through the effort of self. Therefore the neo-Platonic philosophy was inevitable.

Plotinos

Plotinos,[5] the most genuine and important thinker of declining antiquity, built up a system of mystical beauty. The

through him participates in Divinity. See on the subject of Philo's doctrine the larger standard histories of philosophy.

[5] Plotinos (205-270 A.D.) was born in Egypt, of Roman parents. He regarded the body with such contempt that he refused to observe his birthday, to speak of his parentage, to sit for a portrait, or to consult a physician. He took up the study of philosophy at a comparatively advanced age, and came under the influence of the great teachers of Alexandria, where he resided. Later on he traveled to Rome, and seems

simple life of this remarkable æsthetician and worthy disciple of Plato—whose work he perfected—is a story of touching purity and true humility. His death was as noble as his life; it was, in fact, a Socratic coronation of his activity. The heart of his teaching was the thought of the abounding goodness of God, whom he adored under the title of "Inexpressible Fountain of Purity." Like other negative theologians of the Orient, he did not dare, even under the veil of allegory, to reflect upon the attributes of Divinity. It seemed to him bold even to say that Divinity is one, because the statement appears to limit the infinite.

Whatever one might think of the Fountain of Purity (said Plotinos), the concept would still remain imperfect. Goodness, wisdom, omnipotence are names beyond which the power of God still extends. Without Purity nothing could be, nothing would be real, nothing would be beautiful. Resting within itself, this needs no other being, but because of its unending goodness and power it pours out something of itself into a world of endless treasure. Of this world only can one venture to form a concept. As for the Fountain of Purity, no matter how much it may overflow it is never less, just as the sun is not darkened by the light it sheds. Streaming out into the darkness of the universe, the light of Divinity achieves form. The first creation is the spirit that "reflects"—the mirroring eikon. To this one may attribute unchanging being. Viewed from earth, this spirit *is* being. In relation to the Fountain of Purity, however, it is wholly the thought of this Purity in its clarity.

From this spirit in turn is born (as water spills over from a vessel) the spirit of reason. It comprehends the "mirror-

to have died while contemplating the establishment of an ideal republic. His works consist of 54 treatises, arranged in sequences of nine, and had practically been lost sight of when they were again reissued during the Renaissance. See W. C. Wright, *A Short History of Greek Literature,* and William Turner, *A History of Philosophy.*

ing eikon" as being the thought of Divinity, and is therefore self-conscious. Accordingly it contains the fullness of the Divine "ideas" of a perfect world; it *is*, thinking the "ideas" in their manifold character. Inexhaustibly fecund, it floods the bare and darkling nothingness of matter with the light of the "ideas." Each of these in turn, reduced to individuality, becomes a *soul* which loves, sees, represents and shapes *in the world* the idea it is identified with. These souls are hidden in the *World-Soul* from which they spring. Nevertheless each one, as an individual,—pure spirit, human spirit, animal spirit, plant spirit,—forms round about itself a world which is called nature. Unformed matter itself is not properly real, and is therefore only uncreated, not-existing, is dearth of light and complete absence of being. And since God is the highest good, matter can also be termed the absence of good, or Prime Evil.

The shapes which the luminous souls fashion out of the empty darkness are the things of this world. These things completely imprison animal and plant souls, and even the human spirit is held in bondage by them. But man's soul is not devoid of power to save itself. It is true that things are evil in so far as the soul is subservient to them. The wise soul, however, views them all as flooded and made luminous by the light of Beauty. Not stringent form or noble circumstances of space alone can make appearances beautiful; for the shape might also be stiff, chill, meaningless. Only when they reveal themselves as the work of personality does the soul see in the *things* that which is related to itself. Then a quiet, painless joy comes over it; and everywhere in living forms it recognizes the presence of the spiritual. This joy in what is beautiful (for the spirit is beauty) then gives the human soul power to ascend into a higher spiritual realm. Carefully observing its own self, it also follows out the most delicate impulses that leap up in its most

intimate demesne. Finally, through introspection, it views its own nature and the being of the World-Soul. There it discovers and recognizes the "ideas" of the spirit of reason; for such are the intuitions of truth imparted to the little soul of man. This then loses itself in blissful peace, is swallowed up in overwhelming ecstasy; and lifted above all doubts, it washes itself pure in a sea of goodness and beauty.

Plotinos and Plato

The system of Plotinos was the logical sequel to the system of Plato. When they are viewed as the timeless property of God, the "ideas" are more clearly discernible. The earthly path of the soul, out of the manifold into the simple, out of movement into rest, is also freed of the fog of myth. The world of idealism unveils itself clearly as that kingdom of transfigured bodies which mankind hopes to find—beyond. For Plotinos' visionary, time-despising world picture is not at all applicable to this universe. The reality of a sorrowful world, rent asunder by the gulf between body and soul, stuff and perception, is here transcendently transformed. Matter is made to disappear before the power of theosophic imaginativeness.

Ante-classical India and late Greece met in this doctrine. A great cycle of thought was completed. Plotinos was the end. His mysticism of goodness and meditation, though rich with genuine vision and great power of thought construction, did not reach the height of the perfect Christian mysticism of grace, of love, of sin and redemption. His wisdom is an exuberantly beautiful thing, a metaphysical type-poem about humanity. But like all extreme idealism, it leaves the world out of its picture. In common with the later Stoics, the Neo-Pythagoreans and all religious Gnosticism, it considers the body and the earth as of evil. The Epicurean and the Stoic had learned from experience, the noble imagination

of Neo-platonism divined, that man cannot be redeemed by himself. The history of the doctrine of Plotinos is the tragic proof of this truth. Even the pleasing contemplation of spiritual loveliness did not enable this philosopher to escape onesidedness. His poem developed an untenable allegory in which God was likened to a sea in which even illuminated spiritual creation is drowned; and it took no cognizance of the real world of matter and sorrow. Plotinos' doctrine of the Fountain of Purity and the "Good that runneth over" was, in the final analysis, sublimated pantheism.

Followers of Plotinos

It is small wonder that chaos followed this teaching. If all souls flow into the World-Soul, Porphyry (a disciple of Plotinos) [6] was logically correct in his attempt to weave together soul and soul with threads of mystery. Iamblichos [7] vainly sought to multiply the stages of emanation, and summoned the kindly gods of Olympus to his assistance, in a fanciful attempt to revive polytheism. Futile also was the ingeniously contrived system of Proclus,[8] who tried to crowd the basic concepts of every antique philosophy into one doctrine which mapped out the nature and origin of all things, together with their return to God. Not less fruitlessly did Julian the Apostate finally attempt to stake the imperial power upon a victory over the rising might of Christendom.

[6] Porphyry (233-304 A.D.) was a Syrian who lived successively in Athens, Sicily and Rome. His service was to have explained and defined the teachings of Plotinos. See T. Wittaker, *The Neo-Platonists.*

[7] Iamblichos (died about 330): see pages 109-211.

[8] Proclus (410-485 A.D.) an imaginative oriental thinker, attempted to systematize all the Neo-Platonic doctrines. He differs from Plotinos chiefly in his view of the origin of matter and in his acceptance of decadent pagan practices as aids to the attainment of mystical consciousness

His tragic downfall was the widely perceptible sign that the old religions of self-salvation had broken down. When Justinian finally closed the schools of classic philosophy, he buried a corpse.[9]

[9] In 529 A.D. the emperor Justinian forbade the teaching of philosophy in Athens.

CHAPTER V

THE PHILOSOPHY OF TRUTH

1. Transition to Christianity

The disciples of mythical religions created, as we have seen, a proto-poem of their ethical ideal out of gloomy desire and instinctive yearning. They wanted the pleasurable moment to abide—or rather, they begged it to remain and asked that time should pass quickly so that it might be enjoyed anew with every moment. Dreams like theirs, after the manner of all reflective idealism, craved long life and undying youth. Mythical hunger demanded endless pleasure; and in *Epicurus* this longing found its best exponent. On the other hand, the *Stoic* promised to impart the power for which men besought the gods. But such ideals could not root out desire: cosmic reality cannot satisfy human cravings unless these are modified, and if it did afford what appetites call for, the end would necessarily be disillusionment. That was the *Skeptical* experience of philosophic antiquity. Though the mystical yearning of the *Neo-Platonists* was genuine, and though their psychological understanding of the summoning of the soul by the goodness of God was profound, they, like the great Indians, lacked the grace that strengthens will and the love that overcomes the world. Therefore the beauty of their cosmic poem did not suffice for their redemption; and the ancient world cried out with a thousand despairing voices for the Redeemer. Then there took place, once and for all in the history of mankind, the event of Reve-

lation, which is illuminating and efficacious, decisive and explanatory. This Word, announced by the prophets while it was still to come, was not in itself philosophy but essentially much more.

Philosophy and Revelation

Philosophy, which serves to make possible the knowledge of general truth, can undertake to prove the existence of God. It cannot, however, develop or discover Revelation; it can merely accept the fact, announce it, give thanks for it. But to this supernatural manifestation of Revelation there does correspond an unusual mystical certainty, to which human nature as such is very well adapted. This certainty is a feeling which does no violence to other faculties. The mathematician, for instance, senses after long hours of thinking about a given problem, that a certain line and no other must be carried further; and the result proves the correctness of his estimate. Similarly the centuries have seen clearly that not Apollonius of Tyana, Mithra or Manu completed the task of redemption, but that it was accomplished by Jesus Christ.

The word of the Nazarene is deeper than the most profound philosophical axiom, simpler than the clearest theorem, more easily comprehended than the clearest explanation, more overwhelming than the great tragic poems. As a consequence no description of philosophy (such as this book is) need attempt the task of circumscribing the word of Revelation. But it can draw attention to the fact that philosophy is able to spread out the inexhaustible riches of that Revelation, manifest its marvelous beauty, and demonstrate how it leads to a decisive choice between systems of thought. The Christian philosopher does not thereby surrender any of his own intrinsic worth. His task—which lasts through the centuries—is quite normally to expound

and arrange the ideas which came from the Redeemer's lips, and to weld them together with the truth arrived at through investigation of nature and man.

Christianity and Antiquity

Prepared for and announced since the beginnings of time, intertwined with the history of the world, Revelation did not disappear from the earth after the redemptive deed on the Cross. Protected by a tradition of love, it grew and spread enlightenment. Just as grace ennobles the development of the individual life, so also does Revelation transfigure all the tongues of mundane culture. It is an argument for and not against this Revelation that the Greek language spoke of it first and then the Latin. The wisdom of Christendom was even couched in the terms of Greek speculation. The mature and traditional habits of thinking concealed in the ideas of Greek philosophy enabled Christianity to arrive at new goals of thought unparalleled in their profundity. The doctrine of God's love and the soul's salvation required clear definition and statement. One of the first tasks of Christian thought was therefore necessarily to come to a decision about a system of Greek metaphysics; and this the philosophy of the Church Fathers immediately undertook. Next would come the effort to gather and preserve the treasures of antique experience. This task was to be accomplished in the Scholastic era, which would successfully erect the most comprehensive and logical of philosophic systems. This long intellectual effort, which reflected more and more passionately and understandingly upon the fulness of reality, which listened reverently and yet carefully to the turbulence of Divine Mystery, established itself everywhere upon all the experience of humankind in the past—experience with the physical world no less than experience of the rich variety of the human soul.

The Church Fathers

Because the word of Revelation is above and apart from metaphysics, a story of philosophy such as this must discuss the Fathers and Doctors of the Church without reference to their theological significance. We shall pay little attention to many impressive figures, apostles, martyrs and apologists, whose chief interests lay elsewhere than in systems of thought. Nevertheless the growing universal Church used natural and logical investigation as it used art. At the very outset, apologists like Minucius Felix [1] contented themselves with the conviction that no insuperable conflict could arise between Revelation and science. When human reason is not in error, they said, it will find itself in harmony with Divine Truth. Whatever is true, is universally true.

The hypotheses of philosophy, every one of them, are only approximately like cosmic reality. The Church Fathers therefore rightly defended themselves against the disdainful wisdom of the Hellenic schools, each one of which proclaimed its teaching a complete presentation of the world. They saw the vast misery of popular skepticism. It was impressed upon them strongly, indeed, that the strife between the philosophers could not be halted. Therefore Tatian [2]—whom we have mentioned in another place—avowed pessimistically that none of the systems could be accepted. From another point of view Arnobius [3] professed a form of apolo-

[1] Minucius Felix, who lived at the close of the second century, was an apologist who is believed to have been of African origin. His *Octavius* is an interesting dialogue outlining a debate between a Christian and a pagan. As a Latinist, Minucius Felix is truly remarkable. See the article by Paul Lejay in the *Catholic Encyclopedia.*

[2] Tatian, who lived during the second century and had been trained in Greek philosophy, wrote an *Oratio ad Graecos* which defends the Christian faith. He seems to have relapsed, however, and to have professed oriental Gnosticism.

[3] Arnobius (284-505) was a Christian apologist who is said to have been

getic skepticism vis-a-vis the wisdom of the world. If, he said, human search is not to end in theorizing that is aloof from the world, it must constantly build upon the data of observation. But to arrive at the goal of perfect knowledge of these facts would necessitate going down an endless road of sciences. To follow this to the final stage would be, he concluded, impossible. Therefore human knowledge must perforce remain fragmentary. Only the beacon of Revelation can help men across the flux of suppositions. This same gloomy view of philosophy was expressed in paradoxical Latin by that shrewd jurist and fiery polemical writer, Tertullian:[4] *Credibile est, quia ineptum; certum quia impossibile.*[5] The sentence implies that Divine innocence, offering Itself as a mystical sacrifice for guilt beyond reclamation, achieved what is humanly impossible upon the Cross. That is certainly true. Philosophy is unable to arrive at such an action, which is the only one of its kind and does not permit of repetition. Viewed in the light of mere human wisdom, Tertullian's demand seems impossible to the philosopher.

Human philosophy is not, however, committed to the extreme assumption that one system of thought has completely explained all reality. Taking cognizance of the fact that error is probable, it rests content with gradual approach to the truth and concedes that as an hypothetical interpretation of the world any system corresponds only to a part of universal reality. That a philosophy thus humble and upright is possible and valuable, that one can modify the

a rhetorician prior to his conversion. His *Adversus Nationes* is an interesting treatise, showing Platonic influence and collecting a great deal of data about pagan worship.

[4] Tertullian, who died about 160, was a brilliant Roman lawyer and orator who became a convert to Christianity. His defense of Christian doctrine, pungent but not always orthodox, was set forth in numerous books. See W. Turner, *History of Philosophy.*

[5] "It is credible because absurd; certain because impossible."

claims of those who originate systems without thereby repudiating their work, is easily lost sight of by passionate thinkers like Tertullian. Justin the Martyr [6] realized, however, that human nature must be prepared for the reception of mystical grace. A disposition to clear vision that is capable of receiving Revelation has been hidden, he said, in every soul. That is precisely why (we may add) it is not abnormal that India should have gazed so deeply into the psychology of souls in need of redemption. There is an anticipation of Revelation in all genuine spiritual longing. No earnest effort of the spirit is utterly in vain. No great philosophy is written to no purpose. One can learn from all. Sparks of the original fire of reason have burst into flame everywhere on the earth. Even the enemies of truth discover much that is ultimately destined to be of service to it.

This generous and enlightened doctrine, propounded by Justin, was enriched by St. Irenaus [7] through his consideration of the history of philosophy. He saw that the revelation of truth through the ages is not disconnected but enfolds a greater and greater harmony, a constantly deepening significance, corresponding thus to the natural development of the human faculties. Revelation does not forcibly put down human reason; this reason ripens until it meets Revelation. Ecclesiastes speaks more understandingly of eternal love than do the books of Moses. And just as in this case the seer anticipated the doctrine of the Saviour, so there appeared in the deepest thought of Indian and Greek philosophy anticipations of the mystically enlightened wisdom of Christendom. This wisdom in turn did not begin to

[6] Justin the Martyr (100-165) was a Christian martyr and apologist whose *Apologies* and *Dialogue with the Jew Tryphon* are among the most interesting writings of their time. His other books have been lost. See Purves, *The Testimony of Justin Martyr to Early Christianity.*

[7] St. Irenaus, who lived during the second century, was the author of many works, some of which have perished. See Bordenhewer's *Patrology.*

meditate at any arbitrary point, without reference to the past, but accepted Truth as true wherever it could be harvested. It employed the means of thinking developed by the Greeks as it did their language, and grew into history out of the combined treasuries of the past. Precisely because of this clear and temperate reasonableness, Irenaus concluded, Christian philosophy is always the foe of unrestrained fantasy.

2. The Gnostics and Origen

We may define Gnosticism [8]—the doctrine which St. Irenaus opposed—as thinking which does not accept the facts of Revelation as part of the history of the world, but uses them as a pretext for falling back into mythological poetry. It was the result of intoxication through a fantastic, unbalanced idea of Divinity. Secret formulæ, ancient arts of self-hypnosis, hectically expressed spells and forms of temple worship that addled the brain—these, it was presumed, admitted the Gnostic initiates into the wide, nebulous realms of spirits. Every mystery (they averred) unveiled itself before their gaze; no soul's future was dark to them. Faith in the simple and clear word of Revelation they hoped to replace with a manifold science. Disregarding the fact that secret science cannot ever be science—for every result of honest investigation must be capable of proof by anybody who has a clear head, the necessary equipment and adequate industry —a few of the Gnostic elect presumed to establish something

[8] Gnosticism was literally a doctrine that salvation could be achieved by *knowledge,* but it involved many other characteristics. It seems to have antedated Christianity in some particulars, and even to have been Babylonian in origin. Pessimistic in tone, in practice a system for overcoming the "genius of evil," Gnosticism appealed to visionaries and superstitious persons in a wholesale fashion. It has an extensive literature, some idea of which can be gained from Mansel's *The Gnostic Heresies of the first and second centuries.*

like a monopoly of wisdom. Of course St. Irenaus also taught that Revelation must be understood in the spirit as well as in the letter. But he did not thereby open the door to every form of Neo-Pythagorean dreaming.

The Gnostic Writers

If we were to attempt a description of the numerous chaotic Gnostic world-poems, a volume would be required. Valentinus' [9] account of God and the world must suffice to illustrate them. A dark abyss, filled with undecipherable silence, was originally the Godhead, unconscious of itself. This is called "Fore-father," but it did not think or create anything. Round about it there was nothing but emptiness—dark, non-existent matter which, being without form and structure, was utter nothingness and had no value. Thought was the first sigh out of the primal silence. The obscure thought-tones, rising from the abyss, embodied themselves as spirits which formed thought in themselves and gave it being and form. Thus their being told the Godhead (which otherwise would have remained unconscious) what is thought, and explained how this thought became creation—that is, creation by spirits. The spirits which thus exemplify to the Godhead its thoughts are called Aions. Their history constitutes the richest material of Gnostic poetry. The indefatigable imagination of one writer—Bardesan—associated feminine spirits with the masculine Aions, and so populated the world with a brood of strange spiritual offspring. Meanwhile, if we return to Valentinus, the Godhead has attained a constantly clearer understanding of itself, and a benevolent attitude of contemplation towards the world that is in bloom.

[9] Valentinus was perhaps the most influential of the Gnostic teachers. Born in Egypt and educated in Alexandria, he later went to Rome. His doctrine is a curious blend of Platonism and Oriental dreaming with badly garbled Christian concepts. As a heretic he drew the fire of many Christian doctors.

Thus the poet's theogony becomes cosmogony. Fulness of being stands opposed to the great void of nothing. The Aions in their turn are seized with a desire to fashion dark matter into stars and the earth. One of them makes himself the creator of the earth, and is aided by planetary spirits. But soon many spirits are fonder of the earth than of the Godhead which they serve.

According to one Gnostic writer, it was Satan who was first overmastered by this love of earth. And soon other writers, pessimistic by nature or by reason of experience, were terming Satan the maker of all, the former of matter. Thinkers like Carpocrates,[10] led on by insight into the power of evil on earth, even worshipped Satan under the name of "Satanael." Still other Gnostic poems, notably the *Pistis Sophia*,[11] develop an idea of daughters of a "Pure Wisdom," who were led into bondage by love of the earth and then begged Achamoth for release from their chains. To them and to the spirits hemmed in by human bodies, the Godhead then sends the most benevolent of its spirits—the Aion-Soter, Christ. Gnosticism often explained away the stark seriousness and human tragedy of the sacrifice on the Cross by assuming that the body of the Saviour was only a pseudo-body, incapable of pain. The reason which prompted this view was undoubtedly the later heathen contempt for the body and the earth, a contempt which grew out of the belief that the roots of evil lie in matter and not in the human will. Thus Gnosticism associated itself with Stoicism, Neo-Platonism and Neo-Pythagoreanism. It was definitely a trend

[10] Carpocrates was famous during the first century A.D. as the founder of a Gnostic sect in Alexandria, Egypt. He held that the world had been created by fallen angels, and taught a doctrine of transmigration of souls.

[11] *Pistis Sophia,* an Egyptian Gnostic treatise of the third century, preserved in Coptic, tells the history of Wisdom in the form of a dialogue between Christ risen and His disciples.

away from the Christian Church. One should beware, it may be suggested here, against underestimating the attractiveness and effectiveness of Gnostic teaching. It still lives on and has quite as many disciples today as it ever had.

In opposition to genuine Christianity, Gnosticism lacked both a thorough knowledge of the world which the soul must rise superior to, and the patience to listen to the suggestions of the soul. Unlike genuine philosophy, it knew nothing of the discoveries that are the fruit of investigation. The Gnostic was apparently indefatigable in constructing systems, but these were mere empty forms filled with fanciful designs. It is always easy to build dream castles; it is, however, extremely difficult to erect them out of the bald substance of facts. Therefore the great Gnostic structure looks like a series of clouds rather than like a mountain. Nevertheless its fantastic inventions are significant as expressions of unquenchable spiritual yearning. In them breathes the soul's eagerness to realize its individuality and its superiority to matter, its future destiny and its summons to salvation. And so the language of the Gnostics guided the pen of a thinker whose heart was passionately aglow with genuine Christian faith.

Origen

The stormy soul of the well-educated Origen,[12] his awe before the timelessness of God, were expressed in his Indian-like visions of a created world endlessly ripening. He could not ascend above the boundaries of time to the eternal Source of time-bound things. Origen also wrote in Platonic terms

[12] Origen (183-254) was born in Alexandria of Christian parents. He seems to have been a very prolific writer, but only comparatively few of his books have survived. His *Against Celsus* is a highly important Platonic defense of Christianity. During his later years, Origen lost himself in a complicated speculation which was declared heretical. See Bigg, *Christian Platonists of Alexandria.*

of the soul's turning aside from God to the created world, and his inexhaustible sympathy with sinful creatures led him to hope that they would all be restored, through redemption, to the sight of God. But he did not weigh the truth that God, who is love, could effect this restoration only if He destroyed man's free-will—the will that makes creation worthy of Him. Origen's majestic soul knew no boundaries of thought or effort; his readiness to make sacrifices was unlimited; and his picture of the world is also unhampered —as well as unformed. His gifts sufficed to make him able to effect a synthesis of the Christian Fathers. But this he did not achieve.

This synthesis was the work of a flaming soul—a man who visualized all the quests of philosophy as personal quests, and who fought out all polemic questions not only on paper but in his own heart as well. He was Aurelius Augustine, destined to be known later on as Saint Augustine. From his mind came the final summary of antique philosophy and civilization.

3. Augustine [12]

There is practically no other author who affords so much material for knowledge about the sources, growth and effi-

[12] Saint Augustine, Bishop of Hippo in Africa, was born in Thagaste, Numidia, on November 13, 354. His Father was a Roman officer known as Patricius; his mother, now venerated by the Church as Saint Monica, was a Christian who prayed long and fervently for her son's conversion. He was educated to be a rhetorician, and as such professed various beliefs including Manicheanism and Neo-Platonism. While teaching in Milan, Italy, he met Saint Ambrose, then bishop of that city. As a result of this holy prelate's inspiring teaching of Christian principle, Augustine was received into the Church on Easter Eve, 387. Later on he was ordained to the priesthood, and was consecrated bishop of Hippo in 395. Soon he was engaged in three serious controversies: with the Manicheans; the Donatists (who were the Puritans of the time); and the Pelagians (who taught a heretical view of grace). Many of his books are, however, devoted to subjects independent of these controversies. Saint Augustine died in 430.

cacy of religious insight, or who presents the material so well, as does Augustine. He wrote as the final custodian of classical wisdom, at a time when the intellectual content of Revelation had not yet been determined. He wrestled often with problems which had not previously been thought through. Consequently his writings bear an aspect of constant living growth. Since he himself had not grown to manhood as a Christian, he had adopted the religion of free choice and so had come into it from the outside; and combining as he did great intellectual caution and candour with a burning love for truth and a passionate honesty, he found a vast field and could reap a splendid harvest. Augustine himself has described his development in the mature, analytical pages of the *Confessions.* This absolutely trustworthy

The most important of his works are: *The Confessions,* which narrate his own spiritual experiences and constitute one of the greatest spiritual classics; *The City of God,* a treatise in 22 books, some of which refute the cult of the gods and others of which trace the perennial conflict between the "city of God" and the world; *The Epistles,* 270 of which have been preserved, and many of which are charming and illuminating; *De Catechizandis Rudibus,* a guide to the teaching of Christian doctrine, an American edition of which has been published, with a translation, by Christopher (Catholic University of America); *On Free Will* and *On Nature and Grace.* The complete edition of his works in Latin, as edited by Migne (*Patrologia Latina* and elsewhere) has to some extent been superseded by the later, better, but still incomplete edition known as the *Corpus Scriptorum Ecclesiasticorum Latinorum.* There are many good English translations of *The Confessions,* one of the best being that included in the "Orchard Series" (Burns and Oates, London). No really excellent translation of *The City of God* exists, but a convenient abstract of the work has been prepared by F. R. M. Hitchcock.

The life of Saint Augustine has been told by Louis Bertrand (*Saint Augustin,* available in a semi-satisfactory English translation); by Burton (*St. Augustine, An Historical Study*); and by Eugéne Portalié (in the *Catholic Encyclopedia*). Among the works which have to do with his teaching the following may be enumerated here: *St. Augustine,* by Schaff; *Studies in St. Augustine,* by Hewitt; *Die Lehre von der Kirche nach dem heiligen Augustinus,* by Specht; and *Histoire de S. Augustin, sa vie, ses oeuvres, son siècle,* by Poujoulat.

psychological testimony evidences his inner change and progress. He measured the realm of worldly science. He not merely learned but mastered and gained renown through it. He became a professional rhetorician. Then he, the dionysiac African, bowed to the calm Saint Ambrose. This happened, we must remember, at a time when he had already grown famous for Greek learning.

Long before Augustine became a great bishop, he had familiarized himself with all the scientific methods known to his time; and long after he had adopted the Christian faith he continued his study of special subjects—the theory of music, for instance. Obviously he did not believe that piety would be destroyed by the habit of investigating with scrupulous care the problems of universal mystery. But he also recognized the limitations of the natural sciences. His southern realism never felt at home in the nebulous regions of Gnostic phantasmagory, but yet he realized how soon the careful observation of sensory details is brought to a halt. He thought highly of the methods of logic; but in the course of his struggle for truth he convinced himself that the victory would never be gained by cleverness alone. Not every mean little person can undertake, in a casual manner, the search for truth, on the ground that he possesses some brains. Truth demands the unquestioning sacrifice of a great soul; it is the fruit of an humble, unselfish and unrewarded search for the best possible explanations of reality. The whole personality—intellect, imagination, temperament, will—must enter into the work and must improve itself meanwhile.

Life-Story

Like many another richly gifted man, Augustine was the child of an unharmonious marriage. The bright, patient cheerfulness of his mother could hardly soften the rough crudity of her husband, the Roman decurion. Monica's mild

renouncement of self did not wholly win over the young Augustine. Unrestrained curiosity led him from the school benches into the company of the Manicheans.[14] He fancied that only these belated disciples of Zoroaster had realized with requisite earnestness the terrible reality of evil, or the tragic division of the world. He liked their grandiose idea of predestination; but his nature was still suffused with the arrogance of Manu, the pseudo-paraclete. Yet the interpretation of the world as a composite of light and darkness, each ineradicably hostile to the other from the beginning, was offensive to one so deeply in love with beauty. Aristotle fixed his glance upon the logical weaknesses of the Manichean system; and Faustus, the Manichean teacher, could not refute his objections. Disillusioned, Augustine became sincerely skeptical, suffering thus the malady which affected all of aimlessly drifting philosophy. The less seriously he regarded the content of knowledge, the more securely, however, did he master the forms of thinking. As a result of this acquisition, he gained a tremendous following as a teacher.

His fame induced him to go from Thagaste, his birthplace, to Carthage and thence to Rome. With stalwart intellectual power he mastered the Neo-Platonic doctrines. The æsthetic charm of their philosophical poetry steeped his diction in perfume and radiance, but he found no certainty in the writings of its great exponent Victorinus. He could not see his way clear to repudiating matter and evil as non-existent. Soon after he had been inclined to accept Plotinos' teaching as the truth, he fell back again into academic skepticism.

[14] Manicheanism was a religion founded by the Persian Manu during the third century A.D. It was an eclectic creed containing some Christian elements, but its stress upon the conflict between good and evil latent in the world as principles shows the derivation from Zoroaster. Döllinger, *Geschichte der gnostischen-manicheanischen Sekten* is perhaps the greatest work dealing with the subject.

Then in Milan, where he had gone to teach, he heard Saint Ambrose preach. The old bishop brought him face to face with unsuspected wisdom. Now the highly imaginative African no longer conceived of Divinity as a superhuman figure, or as a radiant fluid suffused through the world, or as a mythical image. Ambrose taught him things which he had never associated with the name "Christian." The Neo-Platonic visionaries, artists by nature, had stressed titanic visionary symbols, which shadow forth creative thinking, rather than the invisible bare thoughts themselves.

The artistic and prophetic temperament of Augustine first unearthed that deeper knowledge of self which leads to mystical contemplation when, under the influence of Ambrose, he abandoned the intoxicating language of symbols. When he had won out in the struggle with Gnostic mythical systems, he had also gained a victory over skepticism. Now he estimated, with Aristotelian temperance, the value of those sources of knowledge which lie in observation and critical reason. These are needed for the knowledge of nature. But observation is limited to a narrow space and to a short time. How little of what goes in in the world is noticed, how questionable would be the value of natural science, did not wisdom open a view upon the depths of the soul! The familiarity of the ego with itself, in contemplation, is stable and beyond the power of aggression. Augustine recalled all the skeptical storms which had blown over. No matter to what limits one might carry doubt, he concluded, the skeptic could never deny that it was he who doubted. Even though I be wrong, I nevertheless *am.*

The Triumph Over Doubt

"Do you know that you exist?"—"That I know"—"How do you presume to know that?"—"That I cannot say"—"Are you simple or composite?"—"That I do not know"—

"Are you in motion?"—"That also I do not know"—"But do you know if you have just now thought something"—"Yes, that I know"—"It is true, then, that you think?"—"Yes, that is true." All these tempestuous forms of reflection, which he recorded faithfully, did not lead Augustine away from life. Immersion in self was for him not an esoteric act of cold thinking, but a deed done through firm resolve. With warm enthusiasm, he pondered the fact that the being of a soul conscious of self was the real life—not the activity of the body. "I am and I live"—this became for him, during his battle for truth, an unimpeachable conviction. Because he gained intimate knowledge of himself he could proclaim that which must be conceded by every skeptic:—it is not only true, but absolutely certain, that we exist. But Augustine did not proceed to make a pastime of hair-splitting, and to analyze his favorite concepts of self-certainty and spiritual life for the purpose of deducing the whole world from them. He who for so long a time had enchanted men with rhetorical diction knew that human reasoning is not of itself creative. Familiar as he was with tropical landscapes and stormy seas, with the heights and deeps of life, he knew that only scientific experience can garner a plenitude of facts. Though a patient observer of the soul's life, he understood how much of the order and form of the world we accept, and how little of it we ourselves create. From bitter experience he had discovered how many good arguments support every philosophical system, and how logically and neatly these arguments can be phrased. But not one of them, he knew, coincides with the fulness of reality. Any one who knows this and can decide between contending systems, any one who then wishes to experience the rare and more perfect spiritual realities, must(he concluded) train himself zealously and sacrificially so that all the powers of his personality may be

ennobled. For only upon the pure does the light shine undimmed.

The Unity of Truth

No matter how poor and limited our knowledge may be, we are nevertheless able sometimes to absorb truth. Every one must concede that whenever a judgment is correct, it holds good in equal measure for every living soul. Therefore, if we are capable of correct thinking (and sometimes we are), we share in one and the same truth. One wisdom is common to all men; and the more of *this* wisdom any one has the wiser he will be. No matter how many people have arrived at a correct conclusion, no matter how frequently it has been arrived at, only one truth is involved. Shrewd sophistry, of course, looks only at the thought under question, and does not bother about asking for whom that thought holds good. But a mind that thinks in terms of the world can never become thus stiffly onesided. It will always ask, "For whom does truth hold good?" And what has ever worried about truth excepting persons? Of course it is not permitted to man upon this earth to arrive at the knowledge of all truth in one vista and summary. But if truth is that which must be referred to a person, there must be one who does possess such a vista and summary, and that one is God.

No finite investigator can fathom the nature of the Divine vision of truth. Nevertheless, whenever man sees a fragment of the truth, then his knowledge becomes *like unto* Divine wisdom. Then his soul is directly in touch with the presence of God, and nature does not intervene. If grace is abundantly given, the soul becomes *conscious* of this Divine presence, and is made worthy of communion with the Source of all companionship. The soul of a friend of many years' standing is more remote than the consciously realized presence of Divinity: I know my friend only through the familiar

expression of his countenance and the quality of his actions; but God is everywhere wholly present. He sees without eyes and speaks without lips. Of Him the soul can, therefore, become conscious without being obliged to recall Him from past experience. Such consciousness of God is arrived at as soon as the soul is free to turn purely and willingly to Him who has never ceased to knock at its innermost gate. To *retire into one's self* is, therefore, an aid to becoming conscious of God, because it is only *in one's self* that He can be met. In turning aside from the senses, one turns to Him.

God and the Soul

The comradeship between God and the soul subsists throughout this temporal life, even though the soul turns itself away. "Thou wert with me, and I was not with Thee!" Augustine cried out in his sorrow. God is near the spirit of the godless, even though they see Him not. Thought is more capable than language of dealing with these profound inner happenings. A language known to the soul, a language which is neither Greek nor Latin, expresses the most sublime thoughts clearly before words become symbols for them. If the living soul rejoices in the thought of God and stands in awe at the announcement of His presence, then the Source of all truth and the Basis of all beauty is made known to it. For the beauty of created things, said Augustine, has its origin in the spiritual beauty of the Creator. Even matter has a loveliness all its own, for the reason that it is much more beautiful than is nothingness. Thus the ideas and language of Plotinos did service to Christian wisdom.

Augustine gathered illustrations from art, custom and the special sciences in order to show again and again that all notions arrived at in these fields of study are rendered trustworthy and deserving of recognition (ultimately) only by being realized by the one and eternal Subject of all knowl-

edge. Everywhere in its thinking and evaluating, therefore, the soul is constantly in contact with the First Cause of truth and value. In God all that man sees or understands transitorily is permanent. We do not, of course, arrive at a knowledge of Timeless Being in the same way as we form an opinion about a particular thing or condition in the field of the special sciences. But every deeply realized and surprising observation, every chain of reasoning, can bring about a change in the drift of the activity of knowing. Then attention separates itself abruptly from the individual thing or condition and fastens itself upon the very Substratum of all knowledge, which had been completely forgotten during the course of the purely scientific investigation. Augustine portrayed the emergence of this deeper vision in the following manner: Turn your attention from the work of an artist to his soul, and see where the beginning of the work lies and from what source its beauty flows. In the same way, turn aside from the contemplation of the world to the wise and creative Cause of the world, who is conscious of all truth in a single glance.

Why then do so few people explore the essential nature of their own souls? Why do they never arrive at certainty about this nature? The reason (said Augustine) is self-will, which is also the root of sin and original sin. Here again Augustine spoke from experience darkened by sorrow. The soul, desiring glory, imprisons itself in attractive intuitions of its own invention. It makes idols of these and venerates them. In love with the creatures of its own volition, the mind concentrates upon them and not upon the actual *reality* it is supposed to adjudge. The spiritual arrogance of the philosopher who will accredit only those ideas which come to him by accident, is the source of all metaphysical error.

Only a soul which is humble, noble and reflectively con-

scious of the Eternal Self can discover *mystical* truth. Arrogance, led astray, will not look at, will not surrender itself to, the mystery of the spirit. Though the soul alone, of all natural things, is present unto itself, it is led by pride to succumb to time, and thus is prevented from seeing the eternally present Self of Divinity, in which there is neither past nor present. And he who does not understand that God is timelessly present will lose himself in apparent contradictions which are like traps he has set for himself.

The Attributes of Divinity

One dare not ascribe attributes to God in the same way as one would enumerate the contents and qualities of an individual human soul. The attempt to do this would lead to meaningless antinomies. Some of these were listed and examined by Augustine. Once the Creator was all-knowing: why, then, did He create man who would fall into sin? Up until the birth of Christ He judged all men according to justice: why, then, does He now suddenly grant mercy? He has desired love and goodness according to His wisdom: will He become powerful enough to make strife and hatred good? In such ways, declared Augustine, do erring thinkers chained to time express themselves. They consider the deeds of God acts which follow one another in God. The humble man, meditating upon the mystical Divine attributes, will not be misled in this manner. Omnipotence is not lessened because It desists from unholy desires. God knows sin, but does not therefore wish it. It is not unjust of Him to choose this or that person, because in reality He has chosen all. If God had wished to create a perfect world, He would, in His wisdom, have been obliged to create free will. But no one can speak worthily of God. We say only what we grasp, and that is very little. From a thousand points of view we

see a thousand attributes. The sinner shudders before God's holiness; the redeemed are swathed in His mercy.

Never, declared Augustine, will finite lips express the mystery of the Trinity. Here blunt mathematical calculation is useless, and only humility can aid a little. One can trace a likeness to It from the human soul with its three forms of facultative power—memory, understanding, will. Each of these operates in a totally distinct manner, and yet no one supposes that three souls exist side by side. The begetting of the Son, the breathing forth of the Spirit, are, moreover, not acts taking place in time. In this way humility affords not an understanding of the mystery, but an analogy for its comprehension. The preservation of the world, viewed as a Divine act, must also not be conceived of as taking place *after* the creation. God wills that time and world be. Here Augustine was attacking the anthropomorphism of the Manicheans. They had asked about God's motives in creating the universe—why He, after a long delay during which no creation took place, suddenly decided to do what up until then He had neglected to undertake. Augustine answered: Before the world was, time could not have passed by, for God had not yet created time. No man has the privilege of knowing when time began. All creation must have had a beginning, and therefore the creature "time" must also have had a beginning. Prior to time there could not have been another time in which there was no time. For time is not eternity. Endlessness even would not yet be eternity. In the same profound manner Augustine discussed the omnipresence of God. God is everywhere, he said, in the same way in which a truth is everywhere. A truth lives in one mind to which it is known as it does in another which has also grasped it. It is not to be multiplied or divided. Even when comprehended by thousands, it is one

and the same thing; and yet each one among these thousands feels it present in himself.

The "Ideas"

By humble contemplation of the Omnipresence of Divinity fashioning space and time, Augustine gained the point of rest upon which his view of the world stands. Seen from that point, the universe attains beauty through order. If one could behold it with God, it would immediately reveal itself as fashioned according to "ideas"—that is, according to the basic thoughts and conceptions of the Divine Logos. To Augustine, therefore, the "ideas" were not the homeless spectres of Plato's system. Of the same character as the "ideas" are (he held) the notions of true philosophy which are arrived at through diligent and critical special study. The course of the world would not run in accord with them if they had not this similarity of character. Each separate object observed by us is fashioned after an "idea." That *which* is fashioned is by no means "non-existent absence of good," but real matter which, however, cannot exist wholly unformed, or completely worthless. This matter and all active energy owe their existence to the free creative Primal Will. If Divinity, in its timeless volition, were to set an end to the powers of the cosmos, they would continue to be quite as little as a forgotten human opinion lives on. The permanence of all substance is anchored in the thought of God, which is unaffected even by time or change. No part of this thought is lost, because all loss is change. And because the cycles in time do not influence the "idea" which directs the working out of energy, the same effect is always repeated when the conditions are repeated. Therefore energies may be said to obey the laws set for them.[15]

[15] Augustine's view of creation, summed up in the rather cloudy phrase "rationes seminales," has attracted considerable attention. A studious if

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The Life of the Soul

The soul, Augustine taught, lives on as an indestructible substance which knows itself. The world, passing before the soul's gaze, changes; but the soul abides. Experience jostles and attacks it, but it is not carried away by the stream of time. Appropriate powers and gifts are bestowed upon it. These it can neither increase nor lessen. It may, of course, use or neglect them, develop them or leave them to lie fallow. The quality and moment of its action are its to fix. Therefore it is also responsible. It is able likewise to find the *way of freedom*—the way of flight from time and world to the presence of God. In rare moments of ecstatic vision, contemplation and scientific thought give way to an intimate consciousness of God. Even these moments, however, are unable to unveil the mysteries reserved for another life; but a foretaste of eternal happiness fills the soul. Augustine and his mother experienced these moments of rapture; and after they had passed his discerning mind no longer believed that only normal, everyday attentiveness can discover valuable knowledge. The forgetfulness of self by the soul in the presence of God is not achieved during normal states of consciousness. But these moments of extraordinary insight also do not suffice to impart that knowledge of Divine mystery and of the world as a whole which is reserved for another life. There will be done what flighty idealism often supposes can be accomplished here below. We shall see all things only in God, because we shall recognize God's handiwork in all things. He will be so clearly revealed to us that we shall know Him in ourselves and in each other. Union between souls will be cemented by pure love, for pure love is the fundamental quality inherent in

not wholly satisfactory account of the matter is given in M. J. McKeough's *The Meaning of the Rationes Seminales* (Catholic University of America).

permanent surrender of the will to God. Thus words which seemed illusory when Platonic mysticism applied them to things of this earth, became a peace-giving philosophy of a transfigured world when Augustine uttered them.

Divine Grace

The soul's mystical happiness is, however, not possible without the help of grace. In dealing with this difficult problem, Augustine was not academic but based his explanation upon his own spiritual struggle and experience. He defended free will against the Manichean determinists. In opposition to the extravagant non-determinism of the Pelagians, however, he maintained that the finite power of free will is not great enough to avoid all sins, and far too weak to gain eternal happiness through its own efforts. The will is merely free to choose between turning itself toward God, and contenting itself with finite things. Immersed in inherited weaknesses, chained in darkness, it cannot actually through its own strength obtain the grace of God, but can only earnestly desire that grace be granted for its assistance. This grace establishes freedom. With God to help it, the soul has the power to choose between doing evil or avoiding it. Or rather, with God's grace, man has the power to choose between *being good* and *being evil.* For doing is the effect of being. Man's free choice to be perverse is permitted by God, because His wisdom desires the world to be as perfect as created things can be. He is not best served by puppets.

Man possesses this uncorrupted freedom, declared Augustine, as long as his soul can seek refuge beyond time in God. While the soul is not chained by the determinism of time, it partakes of God, the true ruling power over all things. Nor does He take this power away. Only when the soul deliberately turns from God and arrogantly seeks its own ends does it surrender the Divine strength that is the origin of all good.

An evil deed germinates in time and bears fruit after its kind, according to natural law. Original sin—which is not merely a sinful deed but also perverse being continuing to live on—is inherited. So long as it is enmeshed in this evil, the soul has lost God, and with Him the power to do good, although the freedom to do evil subsists. The love of God having been withdrawn, the intimate connection between creature and Creator is destroyed. Now the soul sins voluntarily, through perverse nature and self-will. And once the tendency to sin has become a passionate habit, the resistance offered by free will, which after all is only finite in finite man, is overborne. Finally habit acts with almost compelling power.

Nevertheless there is still room in the soul for an earnest wish. There is always freedom enough left for the seriously entertained desire: "Would that I were pure and free." Naturally if the assistance of God is not sought, the condition created by original sin will abide; for no one excepting God can lend to man the assistance of an infinite will. If, then, man is to be rescued from his helplessness, the will of God, as a saving grace, must take the place of the debased individual will and overcome, through its irresistible might, the power of habitual sin. Only thus can sin which is the punitive consequence of sin, against the might of which even the strongest individual man cannot prevail, be eradicated. The gift of grace is God's to bestow as He will. Those elected to receive it are protected against relapse into the slavery of evil; and the revived love for God also strengthens little by little the soul's habit of virtue. Augustine emphasized "election" to grace in order to restrain men from viewing the fruits of goodly being as their own achievement. Nevertheless he held also that God places the act of decision squarely into the hands of the elect, who are the "chosen ones" only because they have directed their wills toward

him. God abandons no one who does not first abandon Him. The Kingdom of Heaven suffers violence from stormy pleas for assistance. Finite souls do not force the redemptive action of God: His own love conquers Him and He sends the waters of grace to the thirsting soul.

Achievement

The ardor of philosophic argument and the bias of his own character led Augustine to stress more vigorously the lofty and earnest aspects of grace than the gentler and more beautiful aspects. Therefore Christian philosophy later enlarged and completed what he had said. In his innermost heart, Augustine had been overwhelmed by the experience of the fulness of Mercy; he was always deeply conscious of the insufficiency of his own will and of decades of bitter spiritual struggle; and he felt at rest in the peace of redemption. He should be viewed not merely as the opponent of Pelagius, but also as the victor over the Manicheans. His work is explained by his personality, but that does not justify a neglect of his objective accomplishment for the sake of a pleasurable observation of the stages of his development. Having the methods and hypotheses of antique philosophy at his disposal, Augustine clarified the Christian tradition of thought and presented it in systematic form. His doctrine of the supernatural is the crown of the great thought of the classic epoch. Plato's concept of the Divine Ideas of Good and their realization on earth was notable; Plotinos' dream of spiritual beauty was singularly lofty; but the noblest fruits of the philosophy sponsored by the Greeks are the Aristotelian system of critical realism and Augustine's metaphysics of grace and supernatural insight. And it should be added that though Plato's doctrine of the ideal republic is rich with wisdom, a greater profundity and universality are to be found in the description of the growth of the Divine

State on earth which Augustine wrote and called *Civitas Dei* —the City of God.

4. The Dionysian Writings: The Clarification of Mysticism

The journey of the soul towards its Source had been described by Lao-Tze, the Chinese sage, with veiled intuitions which seemed like the visions of one awakening to light after many years of blindness. The Upanishads of India had declared that the identification of the soul with Brahman would bring peace, and that knowledge of the Self of God would be salvation. Plotinos had been awed by the spiritual beauty of a soul aware of its destined happiness. But China had sought in God only the soul of the world, thus failing to measure the supremacy of God over all the world. The Indian spirit saw the universe as a dream and believed that the soul should seek refuge in God and end there. Plotinos eliminated blood and tears, sin and sorrow, from his world. Christian mysticism was the first to measure the loftiness of God and the abyss of the world, between which the soul hovers. It knew the mystery of sin and the light of grace. It strengthened both will and personality, because its foundation was the Saviour's mystical sacrifice. In this act He, surrendering all His connection with the world, proved Himself God as He eternally is. Here the Christian contemplative beheld a deed unique in character, which testified to the majesty of God no less than it explained the reality of the world and of human souls. The being of God is without beginning, the being of souls is indestructible, the world can be transcended—these became the conclusions of Christian mystical experience.

The conviction that the homeward journey of the soul to God would not mean its destruction, liberated mysticism of all vague reverie. The idea of a hierarchical order of eman-

ations from the Primal Cause, as entertained by Plotinos, was transformed into the idea of a hierarchical order of created things. A community of love as wide as the world was revealed to the searcher's gaze. The mystical books which are ascribed to Dionysius the Areopagite [16] outline these noble truths. In them the Aristotelian conception of the world as composed of an ascendancy of increasingly perfect natural forms was reflectively blended with Dionysius' conception of a supernatural order. In it man was not considered the highest form of the process of development. He was seen as standing between the realm of grace and the realm of nature. Thus, we may conclude, did the Augustinian insight into the living and indubitable reality of the soul heal the wounds of mysticism. Aristotelian wealth of experience and observation, Augustinian wisdom regarding the reality of the soul, Dionysius' realization of what is communion with God—these are the sources at which the Scholastic doctrine that was soon to emerge would draw sustenance for its great task of explaining the world of observation by means of the wisdom of Christianity.

[16] Dionysius the Areopagite, sometimes identified with the judge of the Areopagus who was converted to Christianity by St. Paul (as related in the Acts of the Apostles), is the name given to the unknown author of four treatises and ten letters written in Greek during the fifth century. These writings have an interesting history which may be traced in the larger histories of philosophy and the encyclopedias. They themselves are included, though in an imperfect text, in Migne's collection of the writings of Greek Fathers.

CHAPTER VI

SCHOLASTICISM [1]

1. The Preservation of Tradition

The centuries immediately following Augustine witnessed the collapse of Hellenic culture and the victory of the Germanic barbarians over the Roman Empire. The wisdom and beauty of the classic time were rescued by the Catholic Church. The torches of Plato and Aristotle gleamed in the cells of monks. Religion became the custodian of culture. Three great tasks had to be undertaken by thought: the ignorant were to be educated, the lore of antiquity was to be illuminated methodically by Christian wisdom, and all ideas of permanent value were to be gathered together into a single system. Only after the rich experience of the older world had been digested, would men sense the need for widening with new methods that experience which is the basis of speculation.

Such periods of formative learning are always interesting.

[1] Scholasticism, probably from the Latin word to designate the master of a school, came to be used as a name for a method and a system of dialectic teaching about the year 800. It was introduced in a measure by thinkers who followed the Age of the Church Fathers, the Venerable Bede for instance. The dominant note is an appeal to reason rather than to mystical insight, although the second instrument of knowledge existed side by side with the schools through all the varying centuries. Nevertheless, the "Schools" were nearly always conscious of an apologetic purpose, and so wedded religion and philosophy. See H. O. Taylor, *The Mediaeval Mind;* De Wulf, *A History of Mediaeval Philosophy;* Harper, *The Metaphysics of the Schools;* W. Turner, *History of Philosophy.*

They prove to what a limited extent greatness of personality is dependent upon scientific attainments. He who looks at the world of facts with a frank gaze and an unclouded reason does not necessarily err because he fails to analyze his findings logically. The great, fundamental ethical and mystical truths of Christianity moved and touched, by reason of their simple grandeur, the unsophisticated souls of the early medieval time. The impressive figures of the hermits were hewn according to those truths. Their beauty hallowed the early translators; and their holiness made Bede venerable. Only myopic learning would try to measure these men by their specific intellectual attainments.

We cannot outline here the manner in which the special sciences of antiquity found their way to the minds of the new Europe. The reawakening speculation was international in the noblest sense of the term, and, as is customary in all philosophic epochs, displayed everywhere certain definite common qualities of growth. The new European metaphysics began with pantheistic tendencies; it ended in a critical-realistic system of spiritual Monotheism. We shall outline it in terms of the present time, and so try to see how permanent are the permanent ideas of all times.

The Problem of Reality

Like all genuine philosophers, the early Scholastics began by seeking to understand reality. Their first questions were not, however, concerned with cosmic origins or fundamentals. As students who had fled from the world they were interested in thinking about the soul; and as Christians they undertook the study of themselves, in a spirit of self-criticism rather than of self-satisfaction. They were too healthy and far too much in earnest to be romantic individualists. Therefore they were not fascinated by the attractive individuality of their personal reflections and errors. They felt that the im-

portant thing about an idea was whether or not it was universally acceptable. Therefore these heirs of antique logic asked themselves: What is the nature of a universal idea and what is its relation to an object? The newly germinating philosophy—like the beginnings of Greek thought—began with a purely abstract problem rather than with a striking and restricted single problem. During the course of the attempts made to solve this problem, and of the strife that followed as a consequence, the meaning of the term "universal" changed. Realization of this change meant the settlement of the contention. By "universal" was understood at the start that existence which is inherent, as something essentially substantial and constantly recurrent, in all objects designated by an idea worthy of acceptance. In the first heat of enthusiasm people stretched this interpretation so far as to ascribe to this "existence" a being apart from the individual real objects. Then, in the second place, "universal" meant the logically accurate and wholly consonant opinion of observant minds—the one opinion worth accepting, therefore—about many comparable separate objects. This interpretation was also pushed too far at first, and some held that the symbols of language, even the sound of a word, were the indispensable framework of the opinion. In the third place, "universal" was taken to mean an "idea" as a Divine thought and cosmic prototype, in the sense taught by Augustine.

The later Scholastics were able to discern that the separate concepts of an interpretative hypothesis are mediate between idea and object. But at first the Schools were intensely interested in the abiding reality of cosmic things and causative happenings. To the "ideate"—which is the reality that corresponds with an idea—they ascribed in part the properties of the idea (unchangeableness, purposiveness) and in part also properties of reality designated by an idea (that

it could be observed and experienced). Modern investigation has proved that "ideate" and "universal" sometimes meant the same thing to medieval thinkers, which must naturally have added to the confusion. Finally the last Scholastics understood by "universals" such symbols as, for the purpose of presenting an opinion worth knowing, are ascribed in a single sense to many comparable single objects.

The "Universal"

This must suffice by way of introduction to the sources of the conflict about "universals." If an opinion is worth accepting, it is (desirably) an opinion held by all those who think for the sake of getting at truth. It is comparatively inconsequential whose spiritual property the opinion first was. If taken away from the original owner it still remains a universal opinion. With this "opinion common to all" even the extreme realists among the early Scholastics had to begin their search for the coveted "universal object." Just as the early Greeks had inquired about being, so these Christian thinkers looked for the *object of the most comprehensive idea.* This idea, it was held, should designate all existing reality. Fundamentally no other object could correspond with it excepting the world as a whole. This includes the fulness and richness of all reality, and is therefore equivalent to perfect. But is not God the only perfect Being? Urged on by this thought, John Scotus Erigena,[2] who had earned fame as the brilliant translator of the writings of Dionysius,

[2] Erigena (John Scotus) was born in Ireland, probably of Scottish parents. Little is known of his personal history excepting that he began to teach about the middle of the ninth century, that he was entrusted by Charles the Bald with the translation of the books of Dionysius the Areopagite, and that his *De Divisione Naturae* was condemned by the Council of Paris in 1210. His works are contained in Migne's *Patrologiae Cursus Completus.* See De Wulf, *A History of Mediaeval Philosophy,* Voll and Gardner's *Studies in John the Scot.*

developed his system of heterodox pantheism. Like every pantheist of primitive eras, he sought the basic cause of all being in the vast breadth of all existence, and not in a selective ascending of the ladder of perfection to the Divine Cause.

John Scotus Erigena

The object of the most comprehensive universal idea, said Erigena, is that of which least can be predicated. In the strict sense, therefore, nobody can say anything about the attributes of God. The separate judgments with which we describe the world apply only to His expression of Himself —to His work. The object of our loftiest idea is, therefore, uncreated, self-creating nature. It is curious to note, in passing, how close Erigena's view of the world approaches that held much later by Goethe. Logically subordinate to the universal idea of creative nature are generic ideas, poorer in content but richer in capacity for definition, which in turn can be reduced to specific ideas. What object shall be attributed to each of these? Erigena's reply was Neo-Platonic in character. Troops of primordial spirits, angelic beings coeternal, perhaps, with God from whom they issue through a process of emanation or "flowing," serve the Divine task with their own energy and take their share in creation. Thus the world we know is brought into being—a symbolic representation of Divine thoughts, created and itself not creative. If abstraction leads the way out of the crowd of exemplars back to the Universal Idea, the human mind will discover also that the yearning of the creature goes upward, away from symbols, to God who, as the light of transfiguration, was not created, and who must also not be conceived of as working, because He rests from His labors. Thus man conceals in his heart the peace of nature that is also Divinity.

The beauty and warmth of Erigena's poetic explanation of the world offers little information about reality or real events. His personal nobility and his skill as a writer cannot blind us to this fact. The relation between one thing that happens and another is quite different from the relation between one idea and another; logical premises and sequiturs are not causes and effects; reasonable judgments merely account accurately for events that have actually occurred. Because all magnets attract iron bodies, this magnetized horseshoe will lift steel filings. I arrive at this conclusion in a logical manner. But the *idea* of "iron bodies" does not therefore attract the *idea* of "steel filings": the second idea is simply classified under the first.

One must never suppose that any given view of the world can be relegated to oblivion by advancing against it a refutation based on errors of logic, construction or observation found in it. One may always be quite sure that an interpretation of the cosmos which crops up again and again (even though it is one-sided or exaggerated) draws its sustenance from profound sources. The poet, who creates his own universe, always describes the world of *things* as a symbol of the cosmos of *ideas*. And so, though the argumentative basis of the work of John Scotus is arid and useless, the face of a prodigal poet peers through his Gnostic interpretation of reality. Where is there a real genus out of which individuals constantly spring into being? Where is the genus which protects the individuals belonging to it and nurtures their growth? Where are the individuals who live more briefly, perish more easily, and therefore have—in a sense—less existence than the genus to which they belong? Where are the individuals who feel a mighty urge to preserve the existence of the genus, regardless of their own self-sacrifice and destruction? Obviously only living and breathing creatures, not forms of thought, are interrelated in these ways.

The time of Erigena was not yet prepared to undertake a critical consideration of the Aristotelian vision of reality. Therefore it groped among darkling mythical images for light, read the whole world in accordance with its impression of one portion of reality, and attributed to Divinity the fate of the cosmos. The pantheistic conclusion, as Abelard would point out discerningly, is inextricably bound up with every system of uncritical realism. Moreover, the greatest weakness of the system—as is in accord with its Platonic origin—lies in the domain of natural philosophy. The *Timaios* of Plato is the source of mythical cosmogonies which invariably attract attention during primitive periods. For example, Bernard of Chartres,[3] who dealt with intellect and matter in a Platonic sense, may be termed the Scholastic Pherecydes.[4]

The Scholastic Advance

Any one who feels inclined to smile at occasional oddities of a nature philosophy in which real existence is attributed to ideas (and which is therefore called realism) ought to bear in mind that the present generation is to a large extent under the spell of similar notions. The whole of Rudolf Steiner's [5] theosophy, for instance, is nothing but a grotesque cosmogony based on an extreme idea-realism; and even certain eminent mathematicians seem inclined to identify hypotheses which cannot be disproved with reality as yet insufficiently observed. With the development of Scholasticism, the champions of extreme idea-realism were forced step by step to evacuate their advanced positions. William of Cham-

[3] Bernard of Chartres, who died about 1125, taught in the city with which his memory is associated. Though only a few fragments of his work have been preserved, it is clear that he held matter to be eternal, though caused by God. In general his metaphysical views were crudely Platonic in character.

[4] Pherecydes was an early Greek cosmogonist.

[5] Rudolf Steiner, recently deceased, was the founder and oracle of a grotesque German theosophic society.

peaux [6] conceded that the genus indicated by an acceptable universal idea was not necessarily a fixed and unchanging substance. Thereby an important discovery (which would often be forgotten later on) was made:—that an idea, which is by nature rigid in character, can be used to mean and define changing phenomena. In other words, in every single exemplar the genus arrives at separate individual actuality. Walter of Mortagne [7] developed, in this connection, the concept of changing conditions in one and the same substance, and therewith stated a problem which had also engrossed Plato. As it grows and ages, the individual living being passes through many conditions. Even though the matter composing its body alters continually, we have a far better reason than the mere testimony of our eyes to convince us that the animal creature itself nevertheless remains the same. This fact would necessarily seem inexplicable to the extreme idea-realist.

Adelard of Bath

Therefore when this doctrine of conditions was advanced, the attempt to assume that the objective counterparts of the ideas exist side by side with their exemplars in a prior world, was also abandoned. Thus the way was clear for the calm views of Adelard of Bath,[8] an English thinker. He taught

[6] William of Champeaux (1070-1121) was a brilliant teacher whom his ablest contemporaries valued highly. His chief work, *De Origine Animae,* defends the creationist theory of the origin of the soul.

[7] Walter of Mortagne was a twelfth century philosopher who died at Laon in 1174, as bishop of that city. His *Opuscula* and other writings reveal him as a forerunner of moderate realism.

[8] Adelard of Bath lived during the opening years of the twelfth century. He seems to have travelled widely and to have accumulated much that was then curious lore. His works include *Perdifficiles Quaestiones Naturales* ("Very difficult problems of nature") and *De Eodem et Diverso* (an ethical treatise). He also translated Euclid, then a little known author, and several other writers of antiquity.

that the "universal" means, first of all, that which is common to all designated objects which are wholly comparable one with the other. Of course, just as there are resemblances between figures which one invents or draws for one's self, it is always humanly possible to read, in an arbitrary manner, resemblances into objects which can hardly be compared. One may see a centaur in a cloud, a human nose in a projection of rock. But resemblances fancifully created are one thing; resemblances patently existing in objects are another. Two things, we say, are as much like each other as two eggs. Only those resemblances which are found in objects, Adelard concluded, are what the "universal" signifies. And so, with his problem of real resemblance, this talented Englishman proposed a question which seems at present—for reasons incident especially to psychology—to open up a fruitful field of knowledge. Adelard, the end of a chain of idea-realists, coincided with Abelard who, as we shall see, took his departure from Nominalism.

Anselm of Canterbury

Meanwhile a great figure had interposed itself. The secret of Anselm of Canterbury [9] is revealed by his phrase, *Credo ut intelligam*—"I believe in order that I may understand." The idle sophistry of many has led them to pounce with excessive haste upon this formula. If I know about

[9] Anselm of Canterbury (Saint Anselm) lived from 1033 to 1109. He was born in Piedmont, roamed through France as a wandering scholar, and finally settled down at the monastery of Bec, in Normandy. After having joined the community, he spent some years in study and was then chosen abbot. Learning flourished under his guidance, but in 1093 he was appointed to the vacant see of Canterbury, in England. His *Proslogium,* otherwise known as *Fides Quaerens Intellectum,* contains the celebrated "ontological argument." His other writings are equally significant and have gained for him the title of "second Augustine." Certainly his was the noblest mind of the time. See R. W. Church, *St. Amselm,* and the *Catholic Encyclopedia.*

something (this sophistry declares), I need not believe in it. But if I am absolutely determined to believe something, no theoretical argument will sunder me from my prejudice. These facile statements seem to clinch the matter. Both are true, we may concede, if they are taken in a superficial sense. But that not all preconceptions are wrong is a logical fact which neither statement has taken into consideration. Let us note, on the other hand, that the phrase of Anselm is not to be interpreted as meaning, "I will believe now so that later I may see face to face," in St. Paul's sense. If one enters a little more deeply into Anselm's meaning, one will find it easy to accept readily a sentence like this: "I hope to see sometime, in order then to know." For all of us concur without hesitation in such judgments as these: "I observe in order to understand; I reflect in order to know; I gather data from experience in order to arrive at a conclusion; I grant in advance that an explanation is correct in order to test that explanation." Compared with these acceptable statements, what then is the meaning of "I believe in order that I may understand?"

Faith, Anselm held, is able to unlock certain mysteries the secret of which can never be divined on this earth through scientific effort. It may be that he expected a little too much of investigation. For faith such as his creates a genuinely humble attitude of the will. Humility enables one to break with many prejudices in which arrogance had proved the mother of thought, and it alone makes possible a wholly unbiased view of the world. Therefore—as Augustine had also taught—Anselm conceived of faith as facilitating the search for learning. Logical scrutiny, he saw, clarifies, orders and winnows the content of faith; and so he was quite willing to admit that knowledge, for its part, aids belief. Faith also arouses a wealth of deep, otherwise unrealized moods, which prove their worth in the storms of life. These

need not be evaluated too highly as sources of knowledge, but the best emotions do involve a sense of those realities to which they correspond. Thus love is always love for somebody.

In addition it should be noted, if Anselm's teaching is to be estimated worthily, that genuine faith opens up the world of mystical experience. Just as all ordinary knowledge is built upon a foundation of experience, so also is knowledge concerning the realities of faith based on religious experience. To a saint the realization of God is a permanent part of his innermost knowledge. It lies like an unmovable rock at the bottom of whatever intellectual proofs for the Divine existence he may offer. Genuine mystical perception is, therefore, not an extravagant Gnostic "knowledge," which professes to tear asunder the veil that enshrouds mysteries. A soul which has been ennobled by the presence of God does not yet measure and exhaust the depths and the riches of Divinity. Philosophic knowledge also attempts nothing more than to prove the *existence* of God.

The "Ontological Argument"

Anselm's demonstration of the reality of Divine existence—it is sometimes called the "ontological argument"—develops the idea of "the most perfect being" from the experience supplied by faith, and is not intelligible unless one sees it as the conclusion arrived at by mystical contemplation. From experience we know things that have a simple organization and few qualities; we also know other things which combine harmoniously a multitude of properties. We make the acquaintance of living beings which maintain and develop themselves in the face of varied dangers; we know men with rich emotional lives, iron will power and lofty wisdom. And we consider that creature noblest and richest to whom the fulness of good qualities belongs. The

Aristotelian panorama of objects in the order of their determining forms is particularly well adapted to the estimate of things according to their perfection. Criticism reveals to us, of course, the defects inherent in all observable creatures. Each and every one of them lacks perfection of being. And yet there is sound sense in the statement that *one* creature has received the fulness of existence. Everything has a poor or a rich existence, quite apart from our processes of evaluation. Now our thought is not prevented from projecting the *idea* of unimpaired perfection. This idea as such is as easily entertained as an idea of this or that dimension. Moreover, religious experience shows that we do possess the idea of a perfect Being. Therefore, since we ascribe limited perfection to a being that has a meagre existence, it is (Anselm concluded) extremely doubtful that we would ascribe perfection precisely to a thing which was merely an imagined figment and had no actual existence. The most perfect being, then, has the fullest existence. The most perfect being must, therefore, really exist.

The unalterable conviction of the *existence* of a Perfect Being follows (in Anselm's view) from the *idea* of a Perfect Being. If we read his words as a mere amalgamation of cut and dried notions, his ontological argument will appeal to none of us. As he stated it, it is admittedly not yet a binding argument. Even though one have reason for doubting that one would attribute perfection, in the sense entertained by religious experience, to a mere intellectualized figment, still the possibility is not excluded that one has really done so contrary to expectation. Anselm did not sense the pertinence of this objection. As a mystic he had to say to himself: The act of knowing and the act of experiencing are always two separate things. When I observe a color, I do not at the same time know about it and about my observation. But in the state of mystical consciousness I am so

aware of myself that I both experience self and know self. I know of my *spiritual existence*, not of the metaphysical attributes of the soul as the active principle of life, or something of that sort. Moreover, in mystical contemplation an event occurs: the experience of the presence of the Perfect Being, and at the same time the realization that it is impossible to conceive of this being as anything excepting real.

And so it happens that the ontological argument (or the argument of mystical realism) has always convinced the mystics. St. Bonaventure and even Hegel championed and defended it. But unless one has lived in the state of mystical consciousness, the argument does not prove convincing. This was the opinion of Aquinas regarding it, and with him most men are in agreement. The definition of Divinity as the only One whose nature is necessarily and perfectly realized in His existence was, however, adopted by the greatest of later Christian thinkers. Perhaps enough has been said to show how far Anselm's ontological argument is from being an empty whirr of words.

2. Nominalism and Scholastic Investigation

Realistic Scholastic thought retained for its object the development of concepts and methods useful in the formation of a philosophy based critically and inductively upon the basis of experience. Nominalistic thought, for its part, developed concepts and methods calculated to broaden the basis of experience; and in more ways than one it was the origin of natural science in the modern sense. Neither tendency can, therefore, be denied historical importance. When it was not corrected, naïve idea-realism led to unbalanced Platonism and volatile rationalism. Fostered blindly, naïve Nominalism degenerated into narrow empiricism and mushy sham "enlightenment." But the interaction of the two conflicting systems was decidedly advantageous to the

early Scholastics. Later, after the anarchy of modern thought had begun during the Renaissance, this beneficial interaction ceased and complete disruption ensued. So long as naïve Nominalism attacked the exaggerations of naïve Realism, the contest was quite understandable. The science of realism, healthfully self-critical, was the fruit of this philosophic battle; and Nominalism in turn became a definite and reasoned system.

Roscellin

Roscellin [10] was the first important teacher to dispute the objective reality of the "universal," which he endeavored to describe as that acceptable opinion which, isolated from every person, is no longer the spiritual property of any person. This residue of opinion is not at all like the object it designates. A stream is torrential, my *perception* of it is blue and turbulent, and so is my *representation* of this perception; but the abiding meaning of the genus "torrential streams" is neither blue, nor turbulent, nor itself changing, but is always directed at *the* torrential stream. The "universal," therefore, is applied in a single sense to many often very different objects. It characterizes them in one respect —a point conceded by Roscellin. His attention was, however, concentrated upon the *symbol* which brings about the coördination of the idea and the object, and is therefore attributed in one sense to the idea as such as well as to its object. This symbol Roscellin termed a word, a linguistic sign, a name.

Obviously Roscellin's fundamental principle that the idea

[10] Roscellin, who hailed from Compiègne, in France, was summoned before a council at Soissons in 1093, but of his life little else is known excepting that he knew St. Anselm and corresponded with Abelard. His doctrine is gathered from numerous commentators, and there is still much doubt as to what he actually taught, particularly in theology. See De Wulf, *A History of Mediæval Philosophy*, vol. 1.

is a name or a linguistic sign is a one-sided notion. But we must not be too proud of our ability to castigate his point of view. In our own day many leading thinkers hold that the unequivocal coördination of a symbol and an object is already knowledge, even though it should be obvious that a symbol barren of an idea, of a meaning,—which helps us to find the symbol again as easily as we find a thing,—is like straw devoid of grain. Assuredly the lifeless alphabet, unread and not understood, is the merest mumbling. That was soon pointed out by the contemporaries of Roscellin. His Nominalism shares still another weakness with allied forms of modern thought. Although an idea is wholly unlike a symbol, just as a symbol in turn is wholly unlike an object; and although similar symbols can signify dissimilar objects (and vice versa);—it is nevertheless superficial to say that the same idea can mean intrinsically different objects.

Of course the formation of any idea involves a certain liberty of mental action. There may be a reason for assigning an object first to one genus and then to another. But as soon as we know the object a little more thoroughly this liberty of action must cease. Exterior resemblances may deceive us for a time. We may, for instance, begin by calling a whale a fish; but soon we know that the whale must be classified as a mammal, for more reasons than the symmetry of a text-book. For the exactly determinable real resemblance between the individual "whale" and the genus "mammal" lies at the basis of our scientific conclusion. As soon as this truth is developed, the weakness of Nominalism (ancient or modern) is uncovered. Nevertheless the great importance of its concept of the coördination of symbol and object should be clearly noted.

In its trend toward excessive criticism, the Nominalist view emphasized the reality of the single object and the in-

dividual so strongly that it overlooked that which is common to objects and individuals. Thus the seed was planted for the more modern habit of estranging all things one from the other—a habit which would find all the facts of relationship between objects, even perfectly obvious facts, incomprehensible. The Nominalists also necessarily considered unintelligible the doctrine of the common participation by many souls in one truth. As a consequence the deep, clear vision of Augustine faded; and his principle that the reality of God is present as truth is, everywhere undivided and unaltered, was forgotten.

Abelard

Abelard,[11] the unhappy man of passion, the sorely tempted soldier of intellectual battles galore, the highly gifted but meteorically erratic thinker, the Proteus of Scholasticism, loved in his argumentative fashion to shift his point of view more than was salutary. But he clarified Nominalism to such an extent through his critical analysis that his moderate doctrine resembled and supplemented the reasoned Realism of Adelard. The later Scholastics could then bring both solutions into harmony. Abelard's achievement is, even from the modern point of view, deserving of admiration. The "universal," he said, must be more than a verbal syllable: arrived at by the investigator, it appears

[11] Pierre Abelard (1079-1142) was born near Nantes, in Brittany. At an early age he revealed that curiosity and eagerness for knowledge which were to characterize him throughout life. He sat under Roscellin and William of Champeaux, but was disliked everywhere for his subtlety and —perhaps—his arrogance. Finally he reconciled himself with his enemies, came to Paris as a lecturer, and gained great renown. Very soon, however, he had involved himself in that tragic affair with Heloise which has been the subject for so much speculation. Abelard's later career as a philosopher was marked by incessant conflict and the suspicion of others. His works, all written in Latin, are reprinted in Migne's *Patrologia Latina* and elsewhere. See De Wulf, *A History of Mediæval Philosophy,* vol. 1.

in his thoughtful speech as an opinion; but separated from the investigator, warranted true for everybody and accepted without reference to any owner, the opinion becomes a valuable definitive *idea*. This idea is (to Abelard's mind) not similar to the objects it designates and has nothing in common with them, even though the reasoned individual opinion has been based upon *representations* which are *like* the objects designated. Of course the objects signified, indicated and expressed have similarities and common qualities and are therefore comparable. This likeness between real objects permits one to affirm a resemblance between things themselves distinct. The world is *orderly* and therefore understandable. It is subject to law and therefore not chaotic. The cosmos of ideas is, consequently, capable of being correlated with the much richer and brighter cosmos of reality. The ordering of the world in a way that makes it understandable is (Abelard concluded) the stamp which proves its Divine origin. His alert intelligence thus enabled him to discern the reason why there were several separate meanings of the term "universal." Prior to all things there are Divine universal ideas, and in all things there are real universal properties shared in common. It is the task of philosophy to construct its universal ideas judiciously.

Because nature offers a wealth of unsolved problems, because it contains many unknown quantities, the student investigating it will be hesitant, experimental, inclined to form his ideas hypothetically. At first he orientates himself by simple landmarks and disposes of a field of investigation that cannot be covered rapidly by dividing it according to purposive rules. The scientist's method of arriving at ideas is, therefore, Nominalistic. He attributes, hypothetically, the same symbol to objects which are apparently similar. Careful observation then enables him to widen the basis of experience and so to verify the hypothesis. This task in-

volved special difficulties for the mediæval mind. The wealth of experience garnered by antique nature study, particularly as summarized in the Aristotelian encyclopedia, had not yet been explored by the new Europe. The finest minds were, moreover, devoted to the examination of theological and philosophical matters. It would, therefore, be wholly wrong to conclude that the mediæval man had no aptitude for technical study. His buildings, organs, string instruments, watches, automatons and crossbows all demonstrate his practical skill. Modern students of nature also recognize the intelligence of certain general scientific conclusions arrived at during the mediæval era. They are, however, prone to declare that of course all theories in the special science of physics formulated prior to Galileo's time are palpably false. Let us examine this assumption.

Mediæval Science

Let us consider what had come to be accepted of the science gathered by Aristotle through observation, and what was known concerning the testing of philosophical systems according to their accuracy of rule, their "ideate" correctness, and their applicability to the real world. No philosophical system, the mediæval masters realized, can be proclaimed absolutely true; but on the other hand, no such system is without value as a hypothetical approximation to the real world. Now the individual concepts of natural science are hypothetical, even in our own time. The distance between the two—between the concept and reality—is merely not so glaringly apparent today. More delicate investigation is now required to point out scientific mistakes. The two judgments, $\pi = 3$ and $\pi = 4$, cannot both be absolutely right, but as approximate estimates of a rough sort they help us to arrive at the strictly correct conclusion that π lies between 3 and 4. Mediæval physics tried to verify its

estimates in precisely this same way. It realized that approximate judgments are, strictly speaking, false—that is, unless they are *called* approximate judgments. But the difference between $\pi = 3.142$ and $\pi = 3.143$ is more difficult to gauge, because it cannot be discerned by the "naked eye." The mediæval time necessarily made many rough, antecedent approximate estimates, and naturally enough it fought quite as hard over them as the present time does over its scientific conclusions.

Of course we now take only an historical interest in mediæval solutions of problems in physics. Observation tests were incomplete: naïve proofs were what experimentation is now, and the evidence appealed to was a heaping up of as many cases as possible instead of the study of a properly selected specimen. All this could not have been different. Improvement had by no means set in when the Renaissance came along. Typical of that epoch is the assertion of Paracelsus [12] that the sun extracts parasites from objects injured by them. The sun, he said, will draw nails from the shingles on the roof. Naturally (we now answer smilingly) when the shingles bend because of great heat, and the beams warp in the dry air of summer. And so, Paracelsus went on, the sun will draw parasites from the body. Of course it will (we reply) if the medical treatment is in the nature of a sun cure. Paracelsus did not, we see, observe poorly or conclude poorly. His theory of the solar attraction of foreign bodies is not to be taken seriously only for the reason that his observation left far too many things, or factors, unexplored. A short series of experiments would have revealed his shortcomings to him. Similar explanations might

[12] Paracelsus (1493-1541) was chiefly interested in medical science, but relied to such an extent upon magic that his works are often curious indeed. The student of Browning's poem about him may be stimulated to look further into the man's history and work.

be advanced regarding much of the "magical" physics and the alchemy of the Middle Ages. We should also note, however, that the early physical theories of Bernard of Chartres, of William of Combes,—to name only two men,—while still remote from reality, were not fruitless. Naturally the significance of thinkers like Silvester II (Gerbert),[13] who advocated thorough observation, is greater. It was a worthy deed to propose such an ideal as he advocated.

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Science and Abstraction

Three kinds of abstraction are of importance: the analytic, the factual and the logical. Objects permit of analysis. With the help of physics and chemistry we can dissect them into their finest parts. If this dissection is done thoughtlessly, destruction of the object is the inevitable result; and a thing which has been destroyed cannot be rebuilt. But if the dissection is accomplished systematically, the object—whether it be a clock or a chemical compound—can be put together again. An abstraction which conceives first of a whole and then of its proper component parts—that is, those parts which can again be assembled—is therefore an *analytic* abstraction. Just as a thing can be divided into its proper component parts, so also the idea of the thing can be divided into certain definite characteristics. That is, apart from actual object analysis there is also idea analysis. This is not concerned with the *thing* but with the *ideate*

[13] Gerbert, who became Pope Silvester II, died in 1003. He seems to have been educated in Spain and to have absorbed ideas given currency by Arabic teachers. Richer, a contemporary, supplied interesting *Histories* of Gerbert, whose scientific learning and success as an inventor gave currency to numerous legends of "black magic." At all events his advocacy of the study of nature, possibly also of animals, was extraordinary in an age which had not yet learned the habits of scientific study so firmly stressed by Aristotle.

comparable to the thing. One can divide a table into four legs and a top. From the ideate of a table, however, one can take away the superficies, the edges, the corners—none of which can be taken away from the real table.

Factual abstraction takes place in a different manner. It avails itself of distributed attention; it looks into and hears everything. It views the table now as a visual object, now as a thing to touch, now as colored, now as hard. During the process of this abstraction, it is possible to overlook, while noticing that the table is *colored*, the fact that the table is also *hard*. No actual division is made. One merely observes, with methodically distributed attention, for the purpose of gaining knowledge about the object.

Logical abstraction is still another process. Granted that the top of the table is made of green marble, one may fail to observe that it is cool but one cannot help seeing that it has dimension or that it is light or dark in color. This green surface is obviously not, however, divisible into a light surface *and* a dark surface. Logical abstraction can sometimes take the place of factual or analytic abstraction, but the opposite procedure cannot be followed. Now epochs in which nature study is the dominant interest are always *epochs of analytic abstraction*, with reference to genus facts and "ideates." They are inclined to forget that dissection has a much wider scope in the realm of ideas than in the realm of reality. Frequently they believe that through logical and factual abstraction—or, in other words, through theoretical analysis—it is possible to isolate real component parts from an object under observation:—component parts, that is, out of which the object could be reconstituted into a functioning mechanism.

Such ill-considered presumptions have badly marred the psychology of our age of machinery. This psychology developed a doctrine of psychic atomism which has prevented

the exploration of deeper levels of the soul's life. The very casual and largely questionable leisureliness of the psychological laboratory can hardly serve to deepen introspection in the same way as the undisturbed quiet of the monastery. Scholastic and mystical students of the soul possessed this quiet. The searching and delicate psychology of the Middle Ages grew up within the confines of the monastic cell.

Mediæval Psychology

Notice, for instance, the brilliant psychological observations of John of Salisbury.[14] The soul, he said, is irreducibly simple, even though factual and logical observation aid us to describe what takes place in the soul. Human thought is forced by its limitations and narrow range to isolate and judge separately moments (that is, things which have no existence of their own) which are really not separable or capable of dissection. Particularly in the domain of the soul, said John of Salisbury, one must not forget the inner cohesion of all experiences. Saresberiensis set forth this "inner cohesion" with extraordinary perceptiveness. Judgment, he declared, is concerned (in so far as it renders its most valuable service) with the existence and definition of real objects. Sensation and especially the formed perception, however, also indicate existence in their own manner. Only under exceptional conditions does the bright sensory veil that is flung over objects seem something more one's own than something existing apart from one.

Again, reproductions of perceptions, or phantasms, are not externally connected to or accidentally coupled with

[14] John of Salisbury, who was bishop of Chartres when he died in 1182, was an Englishman who was educated in Paris under the most brilliant teachers of the time. His works, most of which are reprinted in Migne's *Patrologia Latina,* dealt with the history of philosophy and the problem of culture as well as with psychology. He was perhaps the outstanding humanist of his time.

emotional states; bright surfaces may, indeed, seem to be endowed with emotion. During states of violent feeling, sensation is bound up with emotion. Of their own power emotions of a deeper sort direct us to objects, the existence of which they seem to indicate. We fear something, love some one, hate some one else. We rejoice over this event and grieve over that. Only very recently have modern psychologists condescendingly ventured to combine their investigations with the thought of John of Salisbury. He knew very well that after all the discursive activity of reason, which annexes judgment to judgment, a wise and contemplative general view will discern that there is (at least within a certain range) indivisible psychical totality.

Early Scholastic psychology thus investigated psychical experiences and acts which are of the greatest importance. Even the Nominalist thinkers, who have sometimes been called forerunners of the modern association psychology, never tumbled completely into that abyss of error. As a student of the soul, Abelard wisely evaluated the rich complexity of perceptions as so many facts of common observation. He did not belittle the room occupied by life-like memory images in the totality of experience. He realized how necessary the bright, gleaming pictures of the incessantly combinative imagination are to the discovery of new views. But it would never have occurred to him to explain the whole of psychic life, including the ripening understanding, out of a series of loosely unreeled series of images. The place of comprehending and defining thought as a unique part of the soul's life was unhesitatingly accepted by Abelard.

Abelard's psychological teachings derived warmth and life especially from his doctrine of the will and of choice. Here also he skilfully avoided one-sided theories—for instance the notion that only emotions, moods and passions can be the

motivating causes of a volitional decision. The perception of a goal, images conveying hope, calm thoughts:—these also (he said) can influence choice, or the act of the will. Yes, where morally valuable decisions ripen in a man who gladly shoulders responsibility, there a reasonable motive gains the victory in the battle between motivating causes, and decides through the strength of an act of practical acquiescence for doing something on principle. The keen mediæval psychologist saw, therefore, that in addition to that content of experience which could be visualized there was also a non-visual content of thought, of volition, and (in a special manner) of psychical "deeds" which might be termed acts and functions. Concerned as they are with the goals of knowledge and desire, these "deeds" may be called "intentions." We may observe how natural it is that the vernacular of all modern peoples should lack precise verbal symbols for objects of research so seldom brought within human reach.

The Mystic and Psychology

With cool earnestness Scholastic thought also struggled with unescapable fundamental problems for the solution of which all normal minds seek untiringly. The mystic is concerned with the highest good of sinful human life, and his search is rewarded with victory. Mystical consciousness is the crown of Scholasticism, but the contemplative monks in no manner estranged themselves from the virtue of clearness of thought. The mighty passion and fervour of their feeling may lead the abstemious modern mind to view them wonderingly and a little enviously, but only the ignorant will reproach them with having entertained unreasoning dreams. Hugh of St. Victor [15] praised clarity of thought which is

[15] Hugh of St. Victor, teacher at the abbey of St. Victor, was born in Saxony. His numerous mystical books—*De Arca Noe Mystica, De Vanitate*

based on reality and accurately comprehends an object. In opposition to all the errors of that philosophy which believes the real *thing* is contained in the sensory *image*, he emphasized the fact that mere staring at something is only the first elementary process of observation. Observation (he said) is properly probative and reflective: it is attentive contemplation undertaken for the sake of gaining knowledge. The purpose of thoughtfully exploring the bases of real things first directs observation to its goal.

Hugh of St. Victor

Another form of reflection—that which elevates introspection above mere reverie—is not directed at external objects or at happenings in this world. This meditative reflection does not flatly limit itself to the stream of impressions, but goes farther and explores the *self*. Profound insight into sinfulness, penance and redemption is achieved. Then things and distractions fade from view, and one is free to look at the true nature of this world. The totality of individual judgments can be summarily scanned like a book which one has read attentively, like a proof which one has followed through to the end, like a science which one has mastered. In the solitude of contemplation, in the wilderness of sin, the soul abides before God alone, with God alone. Thus Hugh of St. Victor gave the age-old awe of the Indies its proper fulfilment. One who looks unthoughtfully into the world is only feebly awake. He who explores and observes is wide awake. For its part, the awakened soul finds a gentle happiness in noticing its secret movements. It ascends to a lofty height when it perceives the nature of the world. But in ecstatic forgetfulness of self it finds the

Mundi, De Amori Sponsi ad Sponsam among them—are classics of Christian mysticism. He was followed by Richard of St. Victor and Walter of St. Victor. These are known as the great doctors of the "Victorine School."

highest mystical Good. Thus mediæval psychology did not content itself with the cataloguing of experience-contents and their association, or with the description of functions. Like Indian psychology it explored the symptoms of the conditions of consciousness and the possibility of changing them. This path leading from reverie through critical observation to controlled vision was outlined by various teachers with constantly purer humility, with ever more burning love. It became the mystical path of Saint Bernard.[16]

3. Arabian and Other Aristotelians

The last of the numberless religions with which Asia Minor deluged the Mediterranean nations during the early centuries of Christianity was Mohammed's doctrine of fate and the sword. Through a truly remarkable exercise of will-power, this doctrine created a cultural entity out of wild Arab tribes. They emerged from crude spiritistic cults but they did not arrive at the depth and clarity of developed Christian culture. Subsequent in time to Christianity, the Mohammedan religion was earlier from the point of view of metaphysical development. That which lumped together the unwasted strength of conquering tribes for an attack upon Western Europe was not an original institution. Out of the grime of his customs, the Islamic conqueror lifted himself up to philosophic speculation—but the elevation was not of his own making.

The Arabian Synthesis

After the conquest of Syria had been effected, there set in a vehement zest for Hellenic culture, so that the influence of Aristotle—and also of Plato—was soon quite as great in the Orient as it was in the Christian West. Indian wisdom

[16] St. Bernard of Clairvaux (1091-1153) is known as *Doctor Mellifluus.*

also was imbibed. Finally the philosophy of the Arabs, like their religion, acquired a definite Christian inlay. Christian Syrians were often the librarians of the caliphs. Freed of the burden of invention, the Arabian philosophy of religion assimilated Aristotelian and Plotinic teaching about Divinity with remarkable ease and so rescued for the creative West much half-forgotten spiritual riches. It was, of course, natural that during the process of translation from Greek into Syrian, then into Arabic, and finally into mediæval Latin, the antique texts should become badly disfigured with interpolations. Historical errors marred all the translations: passages from Plotinos sailed under the flag of Aristotle, and so on. Severe modern professors of philology have been eager to take offense at this. But it ought to be remembered that "doming the Aristotelian world of stars with the mystical sky of Plotinos" had really been the great philosophical synthesis of declining antiquity. And so, though it was not meticulous about labeling the spiritual property it had inherited, Arabian philosophy really hunted and dug out with astonishing tact the total meaning of the antique spiritual development. Such composite formulations cannot be explained on the ground of lacunæ and errors in any particular translation. Western, Oriental and even Jewish Scholastics rebuilt the Aristotelian system in the style of Plotinos. Only the Christian West, however, could use this vast synthesis creatively, because it had the advantage of the heritage of St. Augustine, who had reached his philosophic goal with means placed at his disposal by the ancients.

Even liberal Mohammedan theology did not comprehend the concept of freedom that had been Augustine's. Though it referred to certain passages in the Koran which seemed to acknowledge that man has the power of free choice, it did not prevail over the orthodox Mohammedan view of universal predestination. Thus the moralist Asari taught that

Allah is the cause of the individual human deed and also of the determination to do it, man merely giving his assent and so declaring his responsibility for the deed and making it his own. Asari's opponents, however, thought that even here irreverence to Allah was implied, and asserted that the assent is also of Divine origin. In a similiar manner they opposed the attempt of An Nazzam to defend freedom of the will. Finally, they fell to the level of holding that substance is incapable of remaining in existence more than a moment of time. For the sake of preaching the doctrine of Omnipotence most effectively, their theory—borrowed from India—confused the timeless activity of God with all the chaos of becoming. It is true that the popular mystical movement inaugurated by the Sufi [17] opposed these chaotic deliberations, and sought to escape into timeless eternity from the world of passing things. But by reason of the indefiniteness of its concept of Allah "in whom all things are one" it lost its way into fantastic pantheism.

Farabi and Others

Magic rites were employed to induce meditative comas and so to bring about salvation. Farabi also expressed a preference for intuitions gained through dreams brought on by exhaustive vigils, and sought to identify the "Great One" with the "active intelligence" of Aristotle. In the same fashion, Arabians generally strove to dome the Aristotelian doctrinal system with the ideas held by Plotinos. The richly imaginative Semitic mind thus paid its homage to philosophical thinking which establishes the relations existing between things. But it mistook fantastic rapture for mystical elevation. Kindi [18] first set forth as Aristotelian the

[17] The Sufi, who flourished chiefly in the Persian section of the Arabian empire, relied entirely upon the Koran and sought to practice ecstatic contemplation. Some of them have been truly remarkable mystics.

[18] Kindi, who died in 870, was one of the earliest Arabian teachers.

Neo-Platonic doctrine of emanations; Farabi,[19] as we have noted, substituted "active intelligence" for the First One. Avicenna developed a series of emanations in the Neo-Platonic sense, but designated its individual members in an Aristotelian-Plotinic manner as Allah—the star-gods—active reason. He taught that matter in a state of chaos was not *created* but *formed* by God. Thus began the victory of Hellenism over Mohamed in the hearts of the philosophers.

Avicenna's [20] answer to the problem of "universals" was the same as that given by Abelard in the West. Ganzali [21] was the leader of a mystical opposition: he fought with skeptical arguments the growing Aristotelian dogmatism, as a substitute for which he proposed psychotechnical exercises modeled after those used by the Indian Yoga sect for the conquest of salvation. Spanish Arabs carried these and similar doctrines to Europe. Avempace [22] (Ibn Baddscha) saw the struggle for virtue as something which took place in the breast of the solitary individual. Successful opposition to this view was sponsored by the mysticism of the most important Arab scholiast, Averroes (Ibn Roschid). He held that he was restoring genuine Aristotelianism.

Averroes

Remarkably enough, he emphasized precisely the most questionable theories of the Stagirite; nor did his great intelligence keep him from ending, after the fashion of his race, in a doctrine of magic. The Aristotelian star-gods

[19] Farabi, who died about 950, was perhaps the greatest of the "Arabians of the East."

[20] Avicenna (980-1037) was relatively freer of Neo-Platonic influence than the teachers who had preceded him. His Aristotelianism was, in fact, one of the matters with which Aquinas chiefly concerned himself.

[21] Ganzali (1059-1111) was a brilliant anti-Aristotelian.

[22] Avempace, who died in 1138, was one of the first of the Arab teachers to take up his abode in Spain.

and astronomical science fascinated this emotional son of the Middle Ages. The doctrine of the eternity of matter, also sponsored by Averroes, can be traced to Aristotle; but it had satisfied the great Greek only because his idea of God and time was less carefully reasoned than that held by Augustine. Averroes' concept of the All-Soul was derived from the Farabian confusion of the First One with the "active reason," rather than from the Peripatetic system. In it he expressed one fate of his race—the loss of the hope for salvation, and the consequent search for refuge in magical incantations. If souls are only "foam on the sea of the All-Soul," then telepathic contacts and influences can be credited readily enough. And they were. The very name of pampsychistic magic, which sought the reasoning Being who contains all truth within Himself in the World-Soul rather than in God, summons to our minds the dark shadow of mediæval vice.

This psychological naturalism could not prove fruitful in Europe, even though grandiose schools founded by disciples of Averroes [23] strove to develop it. Moreover, the popular Islamic doctrine of twofold truth—the dictum that being philosophical is one thing and being theological another—did not bring light. But Arabia gave the West the treasurable works of Aristotle, and added much nice observation of the human body and of nature. Even Leonardo da Vinci profited by a study of Arabian anatomy. Nevertheless the philosophical flame of the Middle Ages burned in Europe. This flame was fed also from the deposit of experience garnered by Aristotle, but in its heat the antique heritage was melted and refashioned. Of course the thing was achieved not by precocious professions of wisdom, but through the

[23] Averroes (1126-1198) was born in Cordova, Spain. He was in all probability the greatest of the Arabian commentators on Aristotle, and composed a number of interesting treatises on astronomy and medicine.

exercise of strict method. This method was perfected by Alexander of Hales.[24]

Alexander of Hales

He began by proposing some question which had never been answered and which tormented every reflective person. Then he methodically defined the question, studied it, and explained what it actually meant. The logical stratification of the possible solutions was thus made clear, and the acceptance of an answer not correctly and cautiously arrived at was prevented. Then theoretical explanations supported by good reasons contended one against the other in dialectic battle. Without prejudice every temporarily attractive solution was thoughtfully taken for granted: the reasons which supported the negative were then carefully weighed, and all opposition was considered. Only now could a decision be rendered. The various hypothetical explanations were compared with common experience of reality as such. The reason of reality decided the matter because Alexander of Hales' method was that of critical realism. Of course not only simple, everyday experiences were gauged, but also unusual experiences such as Augustine and Anselm had lived through. The great experience met by the older world—the breakdown of rudderless philosophy—therefore guaranteed that

[24] Alexander of Hales died in Paris, about 1245. His birthplace was Hales, in Gloucestershire, England, where there was a monastic school. He was probably also a student at Oxford, but his Master's degree was granted by the University of Paris. Soon he was a celebrated teacher of theology, and was considered by the Franciscans (whom he joined in 1231) as one of their most brilliant lights. His title of "Irrefutable Doctor" is apparently based upon his skill as a controversialist, although the *Summa Universae Theologiae,* his principal work, is a masterly demonstration of mediæval dialectic method. His influence upon Thomas Aquinas has been much commented upon, but there is no reason to believe that there was any relation of teacher and disciple between the two men. See De Wulf, *A History of Mediæval Philosophy,* vol. 1, and Felder, *Studien im Franziskanerorden* (Freiburg).

Revelation, clear to everyone, would suggest the ultimate decision it alone could render in the battle between minds. This "Scholastic method" served Albert of Böllstadt—Albertus Magnus—in enriching the Aristotelian teaching with material derived from the study of nature.

Albertus Magnus

This gifted man [25] saw in the system of Aristotle not merely the highest attainment in the classical philosophy of Hellenism, but also the richest treasure of experience in the natural sciences which the world up until his time had possessed or could hope to find. The task of philosophical research, he said, cannot be to create—by beginning with some assumption—spectral and threadbare phantoms of reasoning. The acceptable system of thought must stand on a basis of experience which is as broad as possible. Albertus himself appended his study of botany to the zoölogy of the Peripatetics in order to increase the domain of observed

[25] Albertus Magnus (Blessed) died in Cologne, 1280, at an advanced age. He was born at Lauingen, Suabia, and was the eldest son of the Count of Böllstadt. Most of his education seems to have been received at the University of Padua. In 1223 he joined the Dominican Order, going then to teach at Hildesheim, Freiburg, Ratisbon, and Cologne. In 1245 he was ordered to Paris and there received the Doctor's degree. Three years later he returned to Cologne with his favorite pupil, Thomas Aquinas. He rendered valiant service in defending his order against attacks, and for a time dwelt in Rome. It is said that when he received the news of Aquinas' death—the Council of Lyons was then in session—he succumbed to a melancholy which thereafter never wholly left him. His *Opera Omnia* ("Complete Works") have been variously edited and published, and are a storehouse of discussion on all topics of philosophy, science and theology. They had a great influence on all mediæval thought, and gave rise to curious legends regarding Albertus Magnus' prowess as a magician. See Sighart, *Albert the Great: His Life and Scholastic Labours* (trans. by Dixon); De Wulf, *A History of Mediæval Philosophy,* vol. 1; and Drane, *Christian Schools and Scholars.* Other historians of philosophy—Ueberweg, Turner—may also be consulted with profit. The standard work on Scholastic Method—Grabman's *Geschichte der Mittelalterlichen Methode*—awaits an English translator.

facts. And in giving experience its proper place, he also made room for the unusual and profound experience of the mystics. He knew that learnedness alone cannot solve the cosmic riddle, and that the scholar is worthless as a guide through rugged life. Not only knowledge about God, but also action through the grace of God complete the life of man: but grace flows from a mystic Source. Respect for this mystery is an important qualification of reason, which is able to know *that* it is but not *what* it is.

Proceeding in his Aristotelian fashion, the sage of Böllstadt established the borders of reason and mystery. Reason describes (he taught) what is universally true, what can be posited as law, what the nature of many things is. But it cannot discover the nature of the Everlasting Ultimate. God in the infinite depth of His personality (that is, the mystery of the Trinity); that Jesus of Nazareth is the Christ made flesh (that is, the mystery of the Incarnation); that His body is timelessly one with the bread that helped to nourish Him, and with the wine that quenched His thirst:—all these are shrouded in darkness before which we must kneel. But reason critically indicating the boundaries it must recognize is loftier (Albertus Magnus affirmed) than reason which merely wishes to advance in speculation and is without wings to rise.

If, then, Albertus profited by the guidance of Aristotle in undertaking the great adventure of metaphysics without straining the normal powers of reason, he nevertheless did not accept the Peripatetic system uncritically. Where this departed most palpably from universal reality, he strove to deepen its teaching. He spoke of a heaven of stars, not of a realm of stellar spirits. He found it unintelligible to declare that God, towards whom all the world moves by the power of love, does not desire this movement; and equally little could he entertain the idea that the Former of all

forms could abide an entire stranger to His creation. The creation of matter, he said, obviously takes us back to its original beginning—to a point in time previous to which there was no time. Thus, in an Augustinian and Dionysiac spirit, Albertus rose above the Aristotelian concept of nature. He selected the most fruitful and profound thoughts which mankind had arrived at, and coördinated those which rationally belonged together. There was still need for the great smelting flame of a thinker without vanity—a flame in which the mass of acquired speculative information could be welded together into the most lofty system of critical realism to have been made the possession of man.

4. The Synthesis of Thomas Aquinas [26]

If a philosopher, gazing upon the star of his fame, seeks above all to construct his own system of thought, ambition

[26] Thomas Aquinas was born in 1225 at Rocca Secca, and belonged to the family of the Counts of Aquin. His education was begun at the famous monastery of Monte Cassino, and continued at the University of Naples. After his entry into the Dominican Order in 1244, he attended the lectures of Albertus Magnus in Paris and in Cologne. In 1256 he himself began to officiate as a public lecturer; and after his attainment to the degree of Master, he began an interesting career as a travelling professor. After teaching at various institutions in Italy, he returned to Paris and led a brilliant attack upon unorthodox Aristotelianism. His death occurred at the monastery of Fossanova, on March 7, 1274. He was travelling to Lyons, where a Council was then in session. During the process of his canonization, emphasis was rightly laid upon his magnanimity of mind and heart, upon his poetic achievement as the author of the Office for the Feast of Corpus Christi, and upon his truly vast accomplishment as a philosopher and theologian. It should be borne in mind that criticism has challenged the authenticity of many stories about his personal career which still go the rounds. Similarly there has been considerable controversy about the authenticity of minor works customarily attributed to him. For an account of the bibliography the reader of this volume is referred to De Wulf's *History of Mediæval Philosophy* (Vol. II, pages 5-8 and 32-39). Here it may be stated that there is now available an excellent English translation of the *Summa Theologiae*—the chief work of St. Thomas—and that a companion transla-

will probably enable him to attain to an original view of the world but it will not make him the master of a philosophy rich with truth. One who keeps only his own convictions in mind grows blind to universal reality. A thinker rich with that noble humility which Augustine demanded; with that practical concern for truth which is satisfied only through active experience with things as they are; with an openness of mind, which scorns prejudice and harvests truth wherever truth exists; with that genuine originality which never pieces together fanciful and esoteric notions, but coördinates ideas of equal worth and finds what is common in matters which are apparently remote one from the other:—such a thinker is Thomas Aquinas, whose work is a vast creative synthesis and who remains the prince of Scholastic thinkers.

Born under the sun of that Italy in which antiquity abides, a disciple of German speculation through the medium of his master Albertus Magnus, he lived during the years of his greatest activity in Paris, the metropolis of logical clarity. Thus he combined within himself the mental powers of the three peoples of the West most richly endowed for philosophical study. His presentation of Catholic theology as a doctrinal structure, the various details of which are inseparably interjoined, remains today the classic statement of Catholic principle. His philosophical system is everywhere radiant with that nearness to reality which, as far as is possible, guarantees thought against bias. Nor did his strong affection for systematic unity have the effect of leading him to do violence to the unchanging individuality of

tion of his *Contra Gentiles* is in course of publication. Among the numerous works devoted to the study of St. Thomas or his system, the following may be found especially useful: Vaughan, *The Life and Labors of St. Thomas of Aquin;* Grabmann, *Das Seelenleben des heiligen Thomas* (Munich: Kösel und Pustet); Gilson, *Le Thomisme* (English translation by Bullough, Cambridge), and Taylor, *St. Thomas as a Philosopher* (Oxford: Blackwell). There is also a vast amount of periodical literature.

the basic verities through nebulous deductions or explanations. There is no other system of thought which harmonizes so well with healthy common sense as his does. No reasonable person would, of course, expect to find in the work of Aquinas wider expanses of scientific knowledge than were available in his time. But his philosophy has this real advantage over later experimental theories that it does not spurn the treasure of inner and lofty experience. It also reveals an astonishing genius for discovering the essential and important aspects of *all* experience. Thomas was right in a surprising number of instances, as we of the present in particular are constantly finding out. Our discoveries confirm his views, even at times when such confirmation is least expected. Behind us of the twentieth century there lies an epoch of overwhelmingly subjective philosophy, which was critical of the norms of knowledge. No longer confined in its bonds, mankind is now once more able to do justice to the problem of reality—which is precisely the Thomistic problem.

Critical Realism

We may say that Thomas had a passion for universally constant knowledge of cosmic reality and its dependencies. Of course he also realized (with Augustine) that truth as such is established and guaranteed by Divine Intelligence; and of course he held that the primary purpose of judgment is to arrive at that which is universal in real things. But these principles did not mislead him into attempting to read eternal truth directly from the depths of Divinity. Man, he believed, ought not to desire to escape or consider himself superior to any hardship of particularized investigation. The universal ideas at which the philosopher seeks to arrive should be the fruit of observation and thoughtful interpre-

tation. And so Thomas inlaid his presentation of a theological system into the thought-cosmos of critical realism.

Philosophical guidance (he held) leads the thinker to the source of Revelation. Natural science describes many objects concerning which Revelation either has nothing to say, or about which it speaks only in passing. For its part, Revelation clarifies mysteries which philosophy is incompetent to describe, because the Object of these mysteries is exalted above time and unique in nature. About much of reality, however, philosophy and theology are both concerned, though in separate ways. There is no room for fear that they will show ultimately contradictory conclusions, because truth can never be the opponent of truth. Indeed, theological insight ennobles and deepens philosophical knowledge, because theology places *all* the powers of man at the service of speculative illumination, and none of these powers can profitably be dispensed with. The man who is in a position to survey the qualities and concordances of cosmic reality in a full measure is a man whose natural reason will not retreat from acknowledging the Divine origin of it all. But his idea of God is as yet empty and needy. Through philosophy men attain merely to certainty of the existence of a Former of all forms; but Revelation affords a glimpse of a Source of benevolent Love. In principle, therefore, Thomas shared the open-hearted and temperate views of Justin concerning the value and range of human knowledge. This knowledge is, true enough, only an *approximation* to pure truth and reality as such; but it is capable of dealing not merely with quantitative masses but also with qualitative definitions.

Mind and Cosmos

Thomas was fully aware of how geometry, remote from experience, is able to build up its demonstrable idealistic con-

ceptions step by step from a few elements. More clearly than our present or its immediately antecedent past, he saw that only an excessive idea-realism would impose the quantitative formulæ of the geometrical art upon reality, without careful recourse to actual measurements. Many simple, constantly recurring figures and movements—for instance the rolling wheel—cannot (he noted) be described by geometry, unless it interposes complicated mediate assumptions. The very fact that the experimental knowledge of his time was so limited makes the unerring certainty with which Thomas found the actual universal core of many a problem seem much like the uncanny instinct of a somnambulist. Quantitatively also mathematical conclusions about ideal bodies do not conform at all with the structural definitions of material bodies and masses. For example, if the dissection of a mathematical body meets theoretically with no obstacle, that does not mean that the dissection of a real body will be immediately possible. Two obviously very different things are meant by *reducing a real body to its component parts* and *destroying a real body.* Stereometric bodies—for example, an icosahedron—cannot be destroyed. A cabinet may be divided without being destroyed. Bodies which have been destroyed cannot be rebuilt. It certainly makes a great deal of difference whether one cuts a corpse into fragments or dissects it anatomically with, say, the idea of leaving the nerve ganglia intact. Chemical division (reduction) also changes the individual constitution of things.

Thus does the concept of space adopted by the student of nature differ from the concept of space held by the mathematician. Anatomical analysis of the physical body is useful enough. But a natural body, viewed according to its individuality as a whole, cannot be dissected arbitrarily. Similarly, if an element is divided at the expense of depriving it of its proper basic form (by changing the direction

of the paths of its electrons, one would say at present), it is by this very act changed into a totally different thing. If (said Thomas) one reduces the element to its minute component parts by overcoming the resistance of the forces which create its form, it will no longer be that which it was previously. It is, therefore, not sufficient—even though it be relatively adequate—to describe an atom merely as a nucleus of force or as the smallest conceivable part of a mass. One must also take into account its *formal structure.* This view is precisely the one favored by natural science, in which the idea of form is now being accepted everywhere.

Matter and the Stars

Just as matter cannot be arbitrarily subjected to mathematical operations, equally little can it be divided according to *logical* methods. Of course it is possible logically to abstract color from a surface, for example; but this action is not the same thing as any conceivable mathematical division or physical analysis. Similarly, one may logically separate mass from shape, and stuff from form; but in practice nobody will ever be able to light upon a shapeless particle of formless matter. If matter changes its form, it transforms itself into another variety of stuff. Under the influence of forces, matter may be modified by change of form without altering its shape; for shape is perceptible, and matter as such is not. Matter is necessarily assumed in thinking, because unless it were so assumed, the stream of consciousness, undeniable data of observation and definite actual phenomena could not be accounted for. Our suppositions about movement in matter must also never conflict with a phenomenon the reality of which is beyond question. Here Thomas, without surrendering preconceptions of his own, adopted the conclusion of Democritos—*salvare apparentia.*

If one accepts this method, he says, hypotheses about the course and fate of the stars may also be attempted with the hope of gradually coming near to cosmic reality. One should never say, however, Thomas adds, that such hypotheses are adequate at the start, because new experience will enable the student to rectify and improve them. The Renaissance was therefore in accord with Thomistic views when it reconstructed all Aristotelian and Ptolemaic astronomical theories; the present age, in its turn, is revising the Copernican system to conform with the Thomistic concept of world form and finite stellar space. Thus the harvests of experience reaped by Aristotle and Copernicus are both found valuable.

Movement and Form

Motion, says Thomas, affects the individuality of material things in different ways. Not all movement, even the motion of the stars, is able to change form. Therefore, as long as the form of a thing abides, that thing's essential individuality remains unchanged by movement. But, if the stratification of particles in a physical body is altered by a change of structure, it becomes (chemically speaking) another material body. In case a still more basic alteration of the thing's structure is effected, the substance of the thing may even be changed into another substance. But there are processes which modify matter still more radically. Living bodies preserve their identity of shape for a long time, regardless of the far-reaching mutation of matter that takes place in them.

Life

Changes which occur in living bodies are not really different from changes which take place in inorganic bodies; but they are more intimately interwoven, and so in dealing

with them anatomical description is far less adequate than would be the case elsewhere in natural science. One must seek to discover not only the "here and now" of the change, but also—because of the complexity of the occurrence,—the "why and if." If a ship on the sea were not piloted, it would soon be the plaything of wind and wave—a drifting wreck with sails in tatters. But the magnitude of the power which guides the rudder is comparatively insignificant. This power can, moreover, be furnished to the pilot by a machine or by ignorant slaves; it can be mechanical. The only thing that matters is obviously to what extent, when, and if he orders that the rudder be moved. His *direction* involves no special mechanical power, it does not disturb the balance of forces; it does not destroy energy or create new energy. But there is nevertheless a place for it in the interplay of forces. The soul of the pilot, therefore, is directing and purposive and responsible for the thing done. Upon *it* depend when and where the ship shall come to harbor, and if its power is used to good advantage or wasted. The conclusion is of philosophical importance: the body of man is not to be understood as a machine, but no machine can be understood unless it is referred to man.

The body is something decidedly different from an invented machine, and is piloted in quite another fashion than, let us say, a sailing vessel. One may renew the deck of a ship without necessarily improving the sails. But in a living body every influence that is felt changes immediately the condition of the whole even to the smallest parts. Confronted with the temptation to define these phenomena of the living body as special variations of infinitesimal parts or as mere interactions of energy, in the hope of thus describing them fully, the genuine student of nature—simply as a physicist—would have to shake his head. He would do this the more readily because every slight *psychical* move-

ment (when observed accurately) changes the condition of the body as a whole. Moreover, every agitation taking place in the body can be correctly understood only if one can analyze at the same time the effect of that agitation upon the soul. Who would try to explain a change of condition in a living vessel in the same way as he would a change in a lifeless vessel, when the living one, itself influenced by the altered condition, never remains the same during the period of the disturbance? Growth, propagation and recuperation are essentially a new variety of occurrences of a higher order, and are not to be compared with physical change of location or chemical change of stratification. This will become apparent if one observes the vital forces in cases where they operate most strikingly—in regeneration among the lower, in growth among the higher organisms. Then it is evident that living bodies—plants, animals, men—are not merely formed but *innately* formed. The individual form, self-preservative and self-developing, stamps its impression upon the whole material of the body. This body is, indeed, *realized form*, which develops while it lives. The matter of the body is—in the Thomistic Latin—*materia signata.*

In still another sense the omnipresent self-piloting of the living being is not comparable with the piloting of a machine. A ship is steered from one point. A living being is not. Although the higher organisms are provided with organs of direction situated within the nervous system, there is in this system no seat or location of the soul. This soul has only a *sphere of presence*—a "where"—circumscribed by the body. Organisms without nerves are also innately formed by life. Such a piloting force as that which life manifestly is can, therefore, be conceived of only in terms of the soul. At least our experience does not reveal any other possible explanation. Thought that is independent of space, resolve that is not localized, emotion that cannot

be measured:—these are followed by movements of the parts of the body in definite directions; and even where all these experiences do not consciously occur, spiritual activity may be assumed. Certainly a man will seldom declare that he wills to live and work, to preserve himself and develop himself. But during moments of need and danger, the voice of the soul which forms the body expresses forcefully enough the cry of the imperilled living being: "I wish to exist." Even when it does not yet experience sensation, or feel, or think, the life-force is nevertheless psychically active.

It is, of course, true that the active life-form in a plant is still completely caged in and bound up with the plant body. The animal soul, which shapes limbs and moves the body, does not yet—even when highly developed—lead an individual life. Its effort is never directed at anything higher than the good of its genus, it never plans its existence consciously, it never knows in advance of death. Its finest wisdom is cunning, its highest emotion is sensual pleasure, its most powerful urge is to continue the species, its noblest action is battle. Only man is capable of providing the animal with a highly developed racial character. Thus the animal was for Thomas in no way a mere automaton without experience, good only as man's prey; but he nevertheless beheld the animal soul imprisoned in the beautiful body of which it is the innate life-form. The nature of the animal is (he said) to preserve its species, not to lead a personalized individual existence. Its individuality is simply the separateness of its living body. Man, on the other hand, would not be a person in control of himself were it not for the separateness of his highly and innately formed body. Man's relationship with the animals was thus willingly recognized by the thoughtful Christian philosophy of Thomas, in contrast to later Cartesianism. The human soul (in his view) owes part of its individual self-existence to the development

of the richly equipped body, which it forms unto itself. Indeed, it can surrender to the body and thus give up a dominion which is its right and duty to exercise.

A soul which seriously desired to surrender its dominion for the sake of an animal-like immersion in the flesh would thereby lose itself and its own peculiar well-being. But such riches as it amasses in developing personality can never be lost to it. The ethical gain of an unspoiled childhood remains precious even to a rough man in the time of his maturity. The soul of an aged person also retains, in spite of the gradual weakening of his body, the harvest gathered as a man. Just as the development of the species type is the nature of an animal, so does man enfold his nature by developing his individual person to its own unique perfection. The soul is the reality, the self-purpose, the innate purpose of the body. It is *the spirit which builds up the body for itself.*

The Human Soul as Form

The soul of man is not some kind of thinned substance or thought-mist—a "spiritual matter"—aloof from the body and remote from the world. It is an active form which shapes the body, enfolds life, and is restlessly active. But it is not confined or imprisoned in the body, in the sense of finding that body strange, hostile or basically evil. Such Gnostic views Thomas regarded as wholly unchristian. The soul (in his view) achieves its own existence as a substantial life-form. No legendary "vital force" is associated with it, nor is it divided into many parts by reason of the multiplicity of its functions and faculties. Reason, analyzing the fully developed organism, finds that it is composite in a remarkably manifold way, and discovers in its activities more and more new, surprising, separate qualities. Meanwhile this reason often forgets that its analytical divisions

have not really parceled out the living being into measurements and systems. Indeed, the most highly complex personality is essentially more simple than, say, a massive and beautifully fashioned hill or a chemical alloy. Man is not a medley or a composition: he exists simply by the power of his own living, spiritual, active principle. For no thing is merely *one* thing excepting by reason of the active principle through the operation of which it possesses its nature. So, then, the soul of man is indivisibly simple. Thomas does not, of course, mean to say that it manifests the fulness of its being in all its acts and experiences. That could be true only if the soul always fully realized its being. In reality, memory teaches us that the soul never drains more than a part of its energy. If it does one thing, it must let another be; but the *ability* to do both is not thereby removed.

He who thinks is able, naturally, to feel at the same time; but not all his being enters into the emotional mood for the reason that if it did he would be incapable of thought. He who wants something with determination does not at the same moment observe with untroubled keenness the important details of the thing he looks at. But even though these matters are true, nobody who has understood the basic simplicity of the spiritual principle will think of a "will-soul" and an "emotional-soul" as separate realities. The difference between "feeling" and "willing" is not based upon a real separation between faculties which are distinct. It is merely the result of the simple soul's divers reaction to the outer world, and is thus understood by the reflective mind. Consequently, Thomas declared, the manifold powers of the simple soul work together in knowing and in earnestly resolving.

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Knowledge of Reality

The act of knowing requires both observation and steady thought. The orderly stream of perceptions, which is the ultimate fact observation is concerned with, bears (said Thomas) the relation of *accurate reflection* to the shapes of real things in the objective world. The hypotheses that there are *substances*—i.e., realities beneath—in objects is accordingly the simplest explanation of every-day perceptions—an explanation which never becomes dubious. The nature of these substances cannot, however, be directly perceived. It is arrived at in a subtler way. Through a careful study of the affiliations and dependencies existing between objects, a thinking mind attains to constantly more adequate definitions of reality. It no longer limits itself to the description of separate facts. The universal idea which it gradually works out, applies to that which is, essentially, common to all things of the same kind. Such an essential common property is perceptible only partly or superficially by the senses. Indeed, the comparison of things according to their essential similarities is often based upon properties which cannot be seen: a like *modus operandi* governs the genera established by the mind through reflective abstraction. Only through knowledge of such genera can one come to a conclusion about individuals which group themselves in conformity with a nature the same in them all.

Precisely in building up the intelligible genus does reason prove itself *that which creates relations.* This the investigating personality could not do, however, unless it took and accepted from perceptions relations with which it must be content because they are real. A passive, observant acceptance of these is not sufficient. The world of knowledge is just as much a product of the active mind as it is something real. There is such a thing as contemplative ex-

perience with intelligible genera just as there is a meditation which establishes relations between what would otherwise be unclassified perceptions. The knower, as quintessence of the world, unerringly erects about himself a real world and not a fantastic dream.

The inner kingdom of the spirit, which experience gradually fills with bright and moving pictures of a world, is not strange to or remote from the reality which has aroused its interest. Of course the treasure of ideas and ideals which the soul itself fashions, as well as the mass of memories and invented phantasmata, belongs to the spiritual inner kingdom independently of perception or observation, in the same way as dreams do. But man is rooted deeply in the earth and is bound up with the earth; for he was created to live in the world. The pliable and adaptable soul (said Thomas) does not know world and fellowman only according to the height and fulness of its own personality. It frankly composes its pictures and images to the likeness of the world and of its friends or foes. No one excepting Goethe [27] has enriched the theory of knowledge as greatly as did the simply stated wisdom of Thomas.

The Will

Thought, which finds its way about in and accepts the laws of cosmic reality, can also establish the goal and direction to be accepted by the will. Personality is made *responsible* by the fact that reason investigates goals. Many a deed is, of course, nursed upon the dark soil of instinct; and in carrying it out, man, though possessing will, gives way to a powerful urge. Nor is there much difference between a passionate resolve that flames up out of the ardent desire of the soul, and a similar resolve that is born of needy hunger for the things of earth. As soon as man submerges

[27] See page 405.

himself under the sweet, wild forces of motivating causes, he is not free—that is, unless he gives his consent while realizing his responsibility. Only he who becomes master in the conflict between motivating causes, arranges them in an orderly manner, and establishes a balance between them, can reasonably decide *why* he acts. Such a man uses the narrow playground of choice in order to arrive at a free decision.

Thomas nowhere conceives of free will as a temperamental whim. His doctrine is this: one who can tell himself according to what motivating causes he directs and will direct his conduct, acts not by constraint or force, but freely. Man would be foolish, indeed, if he prided himself upon freedom of action without possessing any sense of values. Patent to all is the way in which instincts, passions, moods, yes even enticing mental images, urge us on with a power comparable to elemental natural forces. But when an understanding of values guides our resolutions, we act without any expenditure of energy. Motives based on values enable one to carry out a purpose understandingly and with a good conscience. "Understandingly" in so far as one who is prepared to assume responsibility for his actions investigates whether his deed is purposive and useful, whether it will help him and others; "with a good conscience" in so far as one estimates pleasure and the objective according to a lofty standard of values. Pleasure, a passing sensation, is certainly not a profitable goal; but permanent salvation is. True utility is not always the same as external gain, and genuine power is born only out of genuine love. Therefore only ceaseless acquisition of the true philosophy of life will reveal what being and what objective are worthy of attention.

Ultimately only that which is of value in the presence of the eternal wisdom of God is valuable to the searching soul. An earnest contemplation of God as the timeless guardian

of values enables conscience to discern those goods made desirable by august Love. As the highest good—the *summum bonum*—Divinity gives Itself mystically to the soul of man. Thus out of all things and their world-wide concordance, the soul that desires what is of value gains a lasting conviction of God's existence.

The Existence of God

Experience shows us a great variety of things that have shape; and shape is an unusual something. It is the contour of a material object and also the contour of a perception. Shape may be drawn with a pen and altered in the drawing; one may dreamily read it into attractive fancies or fashion it out of them; and yet not all shapes are arbitrarily imagined, for many must be accepted as they are observed. We always think of shape as of something we have seen. Between "my own" and "that"—between the inner and the outer world—shape is always the mysterious boundary. The bright hull of the world, the appearance which is evidently actual, impresses us as seen and well-formed. But the impressiveness of this apparition does not have its origin in the dark *things*, but in that prime Source of life who says: "Let there be!" All forms are arranged in a wonderful hierarchic series of shapes. Every human being beholds the thousand different aspects of these forms. Together they make up a cosmos of spiritualized order. The world permits the classifications made by the soul, because it is itself innately well-ordered. This fact is an inexplicable miracle to anyone who denies God. What other personality could have fashioned the world, since only personalities are formative? Certainly not limited man, or his finite soul. The Former of all formers, then, is God. Only Omnipotence could enable the primal forms conceived of by the spirit to solidify into reality and endure in time.

Because forms realized in matter exist, God must exist. If one could see all forms and recognize their infinite variety, how could one doubt Omnipotence?

Experience tells us that our world is arranged categorically. Not in vain do we attempt to discover in it a logical order and harmony. This might well not be the case; and those who deny God term it a lucky accident. But how many "mere coincidences" would have to take place before a well-ordered world could arise from chaos! Nothing is more highly improbable than such a chain of "coincidences." A systematic interpretation of the world must accept cosmic reality as it is. The soul must coördinate itself harmoniously with the world. The little classifications and judgments of the human spirit will then coalesce into a structure of truth which is adequately descriptive of the universe. And yet it cannot be true that this frail spirit *prescribes* the laws which govern events. Who, then, does see the whole of timeless truth, in whose presence does order come into being, who does establish the ideas which govern the cosmos? Truth could not be were there no personality. The whole of timeless truth could not be were there not an Omniscient Personality. Because true judgments are applicable to a world that is ruled by order, therefore God must exist. If one knew the orderliness of all truth, one could not doubt the existence of Omniscience.

Experience teaches us also that not only objects are arranged categorically. Cosmic phenomena are also *invariably connected* with one another. Events similar in character occur when the same conditions occur. We select, by a purposive choice, certain conditioned phenomena and confidently look for a certain result, which will be influenced only a little by attendant causes not reckoned with. This we would not even attempt to do if we did not recognize the close interrelation of cosmic phenomena. We simply make

the experience of—experiencing. If the flood of cosmic happenings were totally unorderly, there would be nothing to learn, nothing to experience, from them. The only thing we could do would be to permit ourselves to be constantly astonished.

As it is we are able to predict occurrences which have been purposively isolated. This does not, of course, prove that the natural order is constant. We might well describe experiences that are the same in character and then go on to list a concurrent number of exceptions. Our experience teaches us that only a probability, sufficient for all practical purposes, exists that an event ordained by the natural order will inevitably take place. Even a phenomenon which has been purposively isolated is influenced by incalculable disturbing causes of natural origin. Who then would deny—a priori—the possible influence of mysterious causes which are not to be accounted for in nature? Experience does not warrant our excluding the incalculable with a cold hand. Only in ordered events does the effective cause manifest itself demonstrably. When man employs active causes, he selectively and purposively arranges them in advance. What would order be without the spirit which creates order? It would be merely an imperfectly discerned, intrinsically incomplete, and unsatisfactory experience.

All experience that is not perfect and complete points, therefore, to a Source of order beyond itself, which is a mysterious spiritual Personality. The chain of causation, constantly indicating something still more primal than the cause immediately discerned, points with satisfying clearness to a First Purposive Cause, when observed by an unprejudiced and thoroughly experienced mind. This First Cause is to be thought of as the source of all causative action, as a purely active primal spirit. God *is* spirit. If one could look over not only the modest affiliations of

causes which man uses for his little purposes; if one understood the phenomena of weather as well as the phenomena of stellar courses; if one grasped the densely interwoven web of all cosmic activities:—how could one then reasonably doubt the existence of God? Though the profound mysteries of Divinity are veiled and hidden, the existence of Divinity is nevertheless evident. Only because our philosophical induction is almost necessarily incomplete (and therefore so infinitely more difficult than a mathematical proof), only because our glance is bounded by the walls of our attachment to events that are useful to us, do we often fail to perceive the full weight of the evidence for the existence of God that is written in the book of nature.

Only a narrow vision could be blind to the manifold kinds of causative dependencies to which the various objects of knowledge are subjected. Correct derivation of the conclusion is the rule governing accurate judgments; the mathematical symbol is ruled by the principle of derivableness; the interplay of forces by acting causality; history by the regularity with which events recur. To discover and define things like these is ultimately to act creatively, and is achieved to a limited extent by finite intelligences. But this creative action never succeeds in bringing into being something equally as perfect and active as itself. The sculptor's marble does not breathe, the inventor's machine cannot nourish itself. Anyone who attributes these varied kinds of dependency to mechanical causality is simply not reasonable. He jumbles together ideas, forces and elements of space and time. Anyone who reflects more deeply will discover in the multitude of harmonious relations a Divine origin.

It is spiritual life alone which visualizes all these dependencies and fathoms their interrelations; and it is spiritual resolve alone which can use them—here and there, at least—for its own ends. The origin of order must not, therefore,

be sought in matter but in the spirit only—a Spirit which must be eternal, which must be almighty because it clothes ideas in reality, which must be omniscient because it establishes laws, which must be all-wise because it ordains purposes. Wonderful is the consonance which exists between the relations that appear in reasoned judgments and the objective relations with which those judgments concur. Man's ability to infer real phenomena adequately is something so unfathomably magnificent in character that it naturally leads one toward the depths of Divine mystery.

Convincing, finally, in a particularly effective manner are the traces of purposiveness so evident in the organic world. The wisdom here made manifest has always deeply impressed all men who have not confused popular scientific hypotheses with truth. It is true that epochs which have gone astray in the wake of mechanical theories have tried to account for the most obvious and thought-provoking concordances of plant and animal life as "the sport of chance"; but in doing so they have consistently neglected the study of mechanics quite as much as the simple estimate of probability. Our own era is again inclined to accept the psycho-vitalistic explanation as the one most definitely in conformity with the facts. We ought not to overlook meanwhile the skill with which Thomas in his time propounded this explanation. A world so rich as ours is clearly not the creature of fortune, but appears—with satisfying probability—to have its origin in God.

The Discovery of Divinity

This real world is not only a cosmos of dependencies purposively interrelated but also a system of realized values. Supported by very simple elemental substances, a universe has arisen—a world that reveals, as we follow its course, constantly richer forms, constantly more highly developed

shapes, an ever more complex arrangement, a steadily more animated growth, a greater capacity for achievement, an ever brighter splendor of consciousness in its highest stages. Would it really be credible that the pinnacle of perfection had been reached with man, a spiritual yet animal being, in whom so much has been expended and so little brought to a state of perfection? No. Just as our thoughts, which are based on things, do not halt until they have peered into the night of prime matter which is the potency of all forms that weld themselves to it, so also do they continue their flight until they have ascended to the Former of perfect forms—pure spirits—who are nevertheless less perfect than the Fountain of light, the Cause of causes, by whom they have been granted existence. He is then revealed to thought as pure spirit radiant with truth, vast beyond measure, good without any virtue that can be contained in definition, wise without having learned. He is the Self-Being perfectly endowed with pure active existence.

Thus Thomas, the philosopher, designated God as being that which the mystics proved Him to be. He refused to employ the ontological argument for the existence of Divine Personality. This argument could not, in his opinion, be the method of science because it transcended the ordinary powers of knowledge. We do not harvest our ideas directly out of the depths of the spirit; we reap them slowly, in a bitter struggle, with our limited implements of knowledge, and they are never more than remotely like the ideas of Eternal Wisdom. The existence of the Light is discernible beyond all doubt, but the clouds of mystery enshroud it for the reason that it would otherwise be too luminous for us to see. Between the pure active existence of God and the mingled being of man there stretches the broad domain of the realm of spirits, to whom (in Thomas' view) noble tasks are assigned. The creatures of this realm, though without

individual bodies, possess individuality in the strict sense. And yet their liberty is such as to permit their turning aside from God into sin, not indeed within time but in the abiding moment of eternal choice. Therefore the source of sin is not the body but the will which chooses being. The boundary line between the natural and the supernatural runs through man. His soul, at home in the realm of grace, is capable of mystical elevation because it can know itself and live within itself. By becoming conscious of the mystery of God and by being redeemed through His act, the soul is finally summoned to follow freely the call of grace to the kingdom of unclouded and beatific vision of Divine Truth.

The Supremacy of the Intelligence

Thus the goal of Christian philosophy, as it is outlined by Thomas, is not the destruction of the will (as in Oriental mysticism) but rather the triumph of the patient and magnanimous will. Arrived at its goal, the emancipated volition rests happy in contemplation, which is not merely contentment of the mind but also a fulfillment of the will's dire need. In assigning to the intelligence a supremacy over the will, Thomas was not guilty of one-sided intellectualism. For on earth the will is not the guide of man: the light of reason makes this will able to choose by showing it the treasurable goal and prize. Desire clarified by wisdom is more nearly perfection because of having been influenced by reason. God also wills the world according to His wisdom; and the fact (of Thomistic philosophy) that He desires good because He is good and not arbitrarily does not lessen His omnipotence.

Values

The man who classifies reality according to the degree of its perfection incidentally establishes values. But he

must not do this arbitrarily. Now the scale of values established by Thomas will not be found wrong by any reflective scientific mind. Particularly the observer who has a sense of values will find that shape of an object which testifies to individual existence more perfect than the accidental periphery of a clod or the stratification of a compound that is the product of chance. This is very evident in the case of the thoughtful images of art, wherein the inner significance of a creature is revealed in a transfigured likeness. Such images lack, of course, the perfection implicit in life, which develops the species character, in a highly individual manner, in every separate living entity—life is form that grows, preserves itself and reproduces itself. That something which needs nothing is more valuable than that something which needs much; that something which is fully developed is greater than a something still imprisoned in a germ:—these Thomistic doctrines will not be disputed by anybody who keeps an open mind. And so the soul, which needs a body in order to realize its personality, cannot presume to place itself on a level with pure spirits.

Nevertheless the kingdom of the spirit is not (in the mind of Thomas) a place remotely distant. On earth it develops vigorously, despite all the imperfections of human nature, in the universal church. By reason of the continuing victory of this power of grace, the meaning of the state changes also. Government, originally accepted as order imposed by sinfulness, takes on a Christian character when seen as the earthly guardian of a Christian people. Mindful of the standards established by Revelation, the state carries out a mission of justice and social charity. It is the custodian of the natural moral law, of family honor, of the spirit of community enterprise. This code of morality is as deeply anchored in natural creation as it is ennobled by the light of grace. The authority of the spiritual community called

the church guarantees the true freedom of responsibility. Human history reveals more and more clearly the work of Revelation, the mouthpiece of which is the teaching faith. This work, historically speaking, never halts while humanity ripens. Models of the just man are to be seen in the Old Testament, models of seekers after truth among the pagans. It is likewise evident that grace nowhere suppresses nature, but everywhere perfects it. A transfigured world, transfigured bodies, illumined only by the light of God, shall one day bring creation to a perfect close. And thus the ring of the Thomistic system is embellished with the jewel of mystical consciousness of God.

CHAPTER VII

MYSTICAL PHILOSOPHY

1. The Historical Aspects of Mysticism

The Thomistic era was also an epoch of great mystical thinkers. Even the metaphysical philosophers, whose work we have considered, were primarily notable for that teaching of supra-scientific mystical wisdom with which it is not easy to deal adequately. The declarations of all genuine mystics in all centuries are so naturally connected that an attempt to set them forth must bear in mind their unity. But we shall make the attempt, beginning with the important question: What is the difference between genuine mysticism and erroneous mysticism?

In our own day there is a great deal of confusion as to what mysticism is. Table-rapping, flitting shafts of eerie light, phantoms like nightmares, tables that dance under hysterical fingertips—all these are presumed to be mystical phenomena. During the conferences of theosophical societies, the spiritual teachings of the Upanishads and of Buddha are materialized to the level of undeveloped minds; and this also is glibly termed "being mystical." In short, contemporary jargon applies the term to much that is merely unintelligible. Let us see if the matter can be cleared up a little.

The genuine mystic is not a magician. He does not claim to convey knowledge that could be discovered more easily

through the use of the honest devices of scientific thinking. He does not seek to accomplish things which could be done more readily with reliable instruments or through investigation. He does not, for instance, pin his faith to telepathy —especially since the invention of the telegraph.

Mysticism, says Hugh of St. Victor, is not scientific knowledge. Its masters seldom employ the language of definition. Generally they are content to use allegorical speech or poetic metaphor as a reverent way of speaking about the hidden mystery of the soul. Just as a merry shout testifies to joy, but does not offer a definition of that joy, so the mystical teacher speaks of the soul itself, of unusual experience itself (as in the case of Anselm of Canterbury, whom we have discussed), without turning aside to offer a scientific description of that soul or that experience. Mysticism discusses the soul most freely when it uses the tongue of the poet but foregoes his imaginative fancy. But it must nevertheless also try, with frank earnestness, to use the especial methods of philosophy to arrive at what Bonaventure[1] speaks of as an "approximate" description. Therefore the ratiocinative methods of Plotinos were accepted by Augustine, and those of Aristotle by Bonaventure. They considered, as others also did, such methods inadequate enough. But they saw that by means of them one might hold to the right direction and so avoid floating about rudderless in a kind of Vedic darkness.

[1] St. Bonaventure (John Fidanza) was born near Viterbo, in 1221. He entered the Franciscan Order at the age of seventeen, and was educated in Paris where Alexander of Hales was his master. A close friendship with his contemporary, St. Thomas Aquinas, is said to have endured throughout life. St. Bonaventure was made general of the Franciscan Order, and was later raised to the dignity of the Cardinalate. Many of his works have been carefully edited and published by modern Franciscan scholars. The best biography is by Krause (Paderborn).

Mysticism and Science

In the light of mysticism one does not view the instruments of philosophic discovery with the eye of science. Problematical questions about the existence and nature of God, or the proofs for the answers to these questions, are not important. The mystic does not worry about why the soul should be defined as an immaterial substantial form. His philosophy is not a metaphysics of world reality, or of cosmic things and their interrelations. It speaks—and here is the key to its meaning—of the soul not as of something that must be described and explored, but simply as a being *which* knows and understands, *which* explores and defines. That can be done only by frankly making an end of observation, calculation, description, study; and by accepting the soul as an entity with which one wishes to become intimately acquainted. This desire is, as Eckhart says, the important first step in mysticism. The wish to be familiar with the soul demands a resolve quite as much as does the beginning of a scientific examination of something—the difference being that, for a person of average gifts, the examination is easier to undertake than is the entrance into that mystical contemplation which, as Augustine says, is possible only for those who have pure consciences and are aided by grace.

Philosophic science investigates the soul—and all sciences can do nothing more—as an object about which something can be known. The knowledge thus gained is not enlarged, not deprived of worth, not changed, by mysticism, because mysticism simply does not posit the soul as a plain cold fact. Now we have arrived at an easily grasped test by which to separate mystical phenomena from the work of the scientist. Wherever science explores the world, it can carry out its task only through an action which is divided

into two sharply differentiated parts. It must, as Bonaventure points out, *observe* and *reflect*. These are two aspects of a mental action that never become one aspect.

Though all the senses be tensely alert, though attention be bright and illuminating in its survey of everything that can be detected with all possible scientific instruments to assist the eye, the ear and the organs of touch, nevertheless the world will remain merely stuff that is stared at, or at best well-arranged smudges of color and beautifully harmonized sound, if there be no reflection and concentrated ratiocination. On the other hand, it is useless to exercise one's best mental skill, to draw the most binding conclusions, or to associate in an original manner ideas that are remote from one another, if one does stand upon a firm basis of observed experience and so guarantee to oneself, by assent in the Thomistic manner, the reality that is worth knowing. But both these weapons of genuine philosophic science are useless in the midst of the struggle for the Mystic Good: for if they could open the way, it would be mercilessly closed to the poor in spirit, to whom it is opened in an especial manner.

Consciousness of the Soul

The first mystical treasure, says Hugh of St. Victor, is consciousness of the self-energizing soul. This makes one familiar with what introspection overlooks—the unique nature of personality. This first, but not most profound experience, is well within the reach of finite man and can be described with the accumulated concepts of traditional thought as well as with the pertinent metaphors of poetry. One may therefore speak of it as follows: "I experience myself" or "I know of myself." But it must immediately be added that in both phrases—in contradistinction to every kind of scientific knowledge—*a single indivisible act* is

meant, an act essentially different from observation and reflection.

Very little is to be gained by altering a few other terms employed by science in order to describe this rare and unforgettable "experience" of the self-energizing soul. One may, for instance, describe this occurrence, never disclosed to or realized by metaphysical vision, by saying: "Now for the first time I have become familiar with myself: now I experience in what manner my existence and my knowledge of myself are one." And yet, though little seems to have been gained here, the individual color and unsurrenderable emphasis of a word must not be abandoned hastily, particularly when there is question of mystical insight; and so it is worth while retaining the phrasing, "mystical knowing and being," and going on to say with Eckhart:[2] "Now I am familiar with myself; now I have become conscious of my own soul." It is now easy to distinguish this "becoming conscious" from every kind of demonstrated knowledge. "Becoming conscious" does not require proof. He who has once experienced it will feel certain of the life of the soul regardless of what proofs establish it or what doubts deter.

From this starting point, philosophy as such may proceed to show why "becoming conscious" is not, for finite men who seek knowledge, the same thing as "knowing." Science is primarily concerned with an isolated occurrence although it never completely fathoms this occurrence because so many others have already preceded. The approximate descriptions formulated by science are then accepted as laws and

[2] Eckhart, surnamed the Master, was born about 1260 and died in 1327. After having joined the Dominican Order he became well known as a preacher and a teacher of mystical doctrine, especially in Cologne. Throughout life he was the center of a storm of controversy; and some of his doctrines were formally condemned by Rome. For a presentation of his system and some account of the extant bibliography, see De Wulf (*op. cit.*, Vol. II, page 125 ff).

rules; its universal judgments always apply to and exhaust only a world that has been artificially simplified by posited conditions. Thus science creates for itself, without falsification, an ideal world similar to and comparable with cosmic reality, even though much poorer in content. This remains true even if investigation constructs a thought-out world so accurately that it becomes constantly more and more like reality. But the more complex and variously formed, the more living and spiritualized, the real universe of things worth knowing is, the wider will be the gulf between the instance that has been *calculated* and the instance that has been *observed*, and the darker will be the abiding shadows of things not known that exist side by side with the portions of reality that are known.

And what remains inevitably the darkest of these shadows? Individuality. For individuality remains unknown and incommunicable: it is the unique coloring of an event, the life that is without a compeer, the separate being of a soul that cannot be duplicated, the unforgettable and irreplaceable experience of a personality. Darker still than any of these, however, is the plain and unchanging mystery which hides behind the statement: "I have become conscious of myself." Fearless science and mystical wisdom are beacons each of which is luminous in its own sphere. It is one thing to know a man and to see through him; it is another to be his intimate friend. We can see through an enemy, possibly against his will; but though we are intimate only with a friend, we cannot force him unto ourselves. Moreover, no matter how earnestly we seek his confidence, it will be offered us only as a free gift of love. One does not sniff one's way into the mysteries of a friend—into secrets which he hides, perhaps, for excellent reasons. One can become intimate with him, as Hugh of St. Victor reminds us, without sounding him fully. That is a useful thing to

bear in mind before proceeding further into the consideration of mystical experience.

Consciousness of God

To use the language of Hugh of St. Victor again, in the court of the mystical temple is found the precious treasure of the soul, but the inner tabernacle of that temple enshrines Divinity, the Highest Good of all mysticism. To "become conscious" of God is to make the most important of all experiences. This does not, of course, render it unnecessary that human reason also should seek God. Reasonable philosophy always reminds itself, in the face of all extreme idealistic forms of thought, of one abiding fact: no real quality of a thing, no happening that produces an effect, can be discerned fully, excepting in so far as it has been made the experience or the act of a conscious personality. And yet, no matter what some persons may say, all things and happenings described with relative accuracy by natural science are in reality independent of the finite human spirit. The conclusion drawn by reflective realism, which finds the origin of soul-enlightening qualities in the Former of all forms and the Creator of all cosmic things, is therefore well justified. If it were possible for man to reach the end of this realistic deduction, he would not (for one reason or another) doubt the existence of God. Meanwhile, as Bonaventure reminds us, the abiding truth of Divinity is not impaired because men gropingly formulate their ideas, gather them slowly and often erroneously from single objects, and piece them together into an always insufficient image of the thoughts of God.

Pure mysticism, therefore, does not view the desperate struggle of philosophy to arrive at a knowledge of God as a mere game. On the other hand, however, this struggle cannot acquire mystical grace by sheer force. The higher con-

sciousness of God—*nulla natura interposita*, as the phrase of Augustine has it—is not philosophical knowledge or a divination of shrouded mysteries: it simply takes place as an intimate communion of self with Self. When the soul which contemplates itself says, "Now I am familiar with myself and know of it," then the quiet whisper of Divinity deeply veiled addresses the passive, unworldly soul with the word of Revelation which the Hebrews put into terms that may be translated thus: "I am the Lord, thy God." All the mystical writings, with their thousand hymns, cannot tell us more about the matter. However carefully one explores them, the answer given is that the fundamental mystical experience is always the same and always basically indefinable.

The vast riches of this experience can, however, be spread out, as it were; though one must bear in mind that it cannot, in the strict sense, be investigated logically, because it is a matter in which the materials of knowledge are lacking. Let us see, first of all, what is the primal source of these riches, so that we may distinguish again between true and false mysticism. Not the soul but the eternal "I" of God is the central jewel. Alert faith acknowledges willingly that it bows before the eternal personality of God; and the mystical soul, feeling itself in intimate communion with the living activity of God, loses itself—the little self surrendering to the timeless "I," as Augustine says. The infinite power of God is, however, manifested as beneficent: He does not destroy the entity of the soul.[3] The soul surrenders *to* God, not *into* God.

Genuine and False Mysticism

Genuine mysticism does not minimize the individuality either of God or of the soul. All false mysticism detracts

[3] St. Bernard.

from one or the other. That is a valuable distinction, even though it is not a full explanation. No array of ideas, be they ever so brilliant or clever, can help us much here, nor can observation bring us to the heart of mystical knowledge. If they could, the mystical highway would be only some kind of secret path to philosophical knowledge. The task we can essay is rather to coördinate the mystical phenomenon with other unusual and psychically important experiences that come to the man of faith, and to seek out, in studying this phenomenon, the roots of numerous volitional acts and moods. It sometimes happens, for instance, that relations which are made known to an enquiring mind through revelation or reason become more understandable in the mystic light.[4] In this sense, as Bonaventure observes, we can associate with mystical contemplation many experiences, thoughts, states of the will, dispositions and images of the imagination, which are as such capable of being studied scientifically. These are always "mystical" only in a broader and traditional sense: that is, they take root in mystical experience or they become clearer when seen in the light of mystical experience. They enrich the happy hours of the saints. Suso and Tauler, Thomas à Kempis, Ruysbroeck, Gerson, Saint Catherine, Saint Teresa and particularly the Spanish mystics—they all speak of such matters in diverse ways.

Both communion with and estrangement from God, as the soul experiences them, must be considered from the mystical point of view if their significance is to be grasped. When the peace of eternity engulfs the soul, says Suso, it is so deeply tranquil that it forgets all the world, even itself. Only when it returns to earth can it relate its experience and —to use a favorite poetic phrase—"pick the petals from the mystical rose." The spiritual disposition of the soul which

[4] Hugh of St. Victor.

has been illuminated mystically is quiet humility, which is far removed from mere contentedness because, as Bernard says, it does not seek satisfaction in any finite good and is not the creature of earthly whims. Humility, which the philosopher also praises as the virtue needed by the investigator, is rewarded in the mystical state with a vision of the Good. Humility is, of course, a nobleness of soul which can also be attained without mystical experience; and he who has knowledge of it, in whatever fashion, will not confuse it with self-reproach, sickly weakness, fear or lowly bashfulness. Only under the rays of mystical radiance, however, is this lofty, generous virtue fully developed. It is the mystical virtue par excellence, corresponding perfectly with that act of God—grace—without which, as Augustine says, there can be no mystical desire or action.

Grace

Genuine (classical) mysticism makes the experience of grace one of its three great tests of truth. Here again we must carefully avoid thinking that *all* experience of Divine grace is bound up with mystical consciousness; but it is this which makes man realize the action of grace as efficacious and beatific. And so one may say, without taking an extreme view of the matter, that grace is the "mystical act" of God. The humble and blessed soul, under the influence of Divine illumination, recognizes itself as a creature; and thus God the creative Self, as Bonaventure says, is opposed to the self that has been created. Unestranged communion existing between the two is the mystical root of the likeness unto God that exists in man; and if this is not correctly understood, error is sure to be the result. In such communion the soul does not become a creative self, but it does escape the world and become conscious of the eternal

"I am" whose essence is goodness.[5] A soul conscious of Divinity is, as Francis declares, in a state of peace. Naturally experience soon proves that this peace is not safe from attack during the present life—a condition easily understandable from a philosophical point of view if we note the earthy associations of the body.

In the mystical state, it is *time* which is conceived of as the gulf between God and the soul.[6] But just as Divinity is present in some given point in space after the manner of a truth which flashes into many heads without ever being made divisible or bordered by the limitations of space, so also does the created soul escape (mystically) the body and all things to share God's timeless presence, *for* which there is a past and a future, but *in* which there is no past or future. Thus does the stream of time flow round the mystical soul; but it does not rush through it, if God affords a preliminary taste of eternity. Yes, without the mystical proximity of God, says Augustine, the soul would never really become conscious of the fact that it will not flow away ultimately with time. Immortality, Bonaventure also declares, is the "mystical characteristic" of the soul that forms the body.

The more intense the mystical radiance and the more marked the escape from time into eternity, the more fearful is the relapse into the stream of time—a relapse which is unavoidable so long as this mystical escape is only, as Thomas Aquinas says, a likeness of what shall some day be, through grace, an enduring vision of God. If this final separation from earth is happiness, the complete relapse from it must be damnation. And it is the lot of mystical man on earth to realize this second fact. The plunge of the will into the time-stream itself—psychologically, the

[5] Plotinos.

[6] Augustine, Eckhart.

awakening from contemplation—is the mystic's explanation of man's fall into original sin. The once humble creature which, as one favored by the grace of God, had found itself in peace, then discovered itself hurled into time, estranged from Divinity, sinful by nature. Here again this explanation does not solve philosophically or ethically the problem of sin and original sin; and much can be accomplished in the state of grace, quite apart from mystical experience, toward gaining redemption. But the mystic does become, sensitively and without any trivial torture of self, conscious of the depth of the human fall. With the most earnest sorrow mystical preachers and poets—Angelus Silesius, for instance—describe the abysmal misery of those whom God has abandoned. Peace regained through grace is the mystical idea of redemption: the soul reborn becomes conscious of God as of One who mercifully forgives. Thus out of the primary mystical event there follows, not faith or the knowledge of God, but indeed the fervor of a religious experience which overcomes the world, and the thirst-quenching coolness of a reverent awe which has seen through the veil of things.[7]

The World

To a mystic "the world" means the totality of those existing things and associations, through possession of which the individual falls into sin. In the state of grace he views all these as not sufficiently valuable to merit being desired or possessed. Nevertheless he takes a peaceful, happy pleasure in the bright and goodly earth which is the property of God, having first come to regard it all with the inexpressibly gentle eyes of innocence regained. After he has made God's will his own, the mystic associates himself with God in the

[7] This is especially characteristic of the Spanish mystics.

ownership of good things, none of which he covets, however, as personal property. Only the mystical soul, hovering between Creator and creation, comprehends the fact that free man has the choice between God and "the world," and that this choice is magnificently simple and decisive. He earnestly desires, as Augustine says, the opportunity to repudiate "the world," and grace strengthens his petition into a resolve.

This profound insight is followed by the soul's discovery of the source of its noblest moods—moods which are always different from worldly sentiment and cheap enthusiasm. The freedom of the mystical spirit is not in the least like solid comfort, even though both are pleasant experiences. Those who confuse genuine kindness with politeness do not know the meaning of the first. Those who think of redemption as a kind of "satisfaction" have never felt the cry of the antique world for redemption creeping through their bones. All psychologists of love who elevate the cravings of the senses to the level of heavenly affection are mere phrase-makers. In the same way, it is only a simile to speak of sin as an illness, and a falsification to call it a regrettable weakness:—for sickness and weakness are things for which one is not responsible. No genuine mystic falls into such errors.

Malebranche and Spinoza

Malebranche who, as we shall see, was lovable and noble of soul, was misled into confusing consciousness and knowledge. Thereby he attributed to mysticism something it never can and should never try to achieve—an untimely revelation of the mysteries of God. According to his teaching, the finite human mind sees the colors and figures of this world in the Divine prototype; and so the soul is actually able to behold with the eye of Divinity, instead of being

limited to piecing together its knowledge of cosmic reality through laborious, imperfect, but still rightly planned investigation and discovery. Here Malebranche incorrectly blended thinking and mystical experience. That is the basic error of all the false mysticism of Ontologism, a mistaken path of needless subtlety which (like many systems of the same type) had to be got rid of with some difficulty, so that the future could be spared much fruitless effort.

Spinoza, for his part, is the prototype of pantheistic pseudo-mysticism. He is the representative of all philosophers who do not proceed to reason from worthless matter to most complexly organized form, from the stellar masses to the individual self of man, from time into the land of eternity, but lose themselves on the wide plains of inchoate thinking. After he has attributed infinitude, unity and order, vastness and necessity, to the cosmos,—excuses for doing which may be found in various places,—he gives it as a surplus the misused and degraded name of God. We have tried elsewhere in this book to trace the origins of pantheism. Spinoza, true to those origins, goes farther and tries to impoverish mysticism by denying the perfect "I am" of God. According to his view, the soul does not lose itself *to* God; it is resolved into, drunk back into, the sea of the cosmos, in relation to which it is a single drop. Thus the doctrine which would impoverish Divinity leads necessarily also to the denial of the soul.

Schelling

Both errors merge in that Gnostic mysticism the last important protagonist of which was, as we shall see, Schelling. This fantastic form of thinking believes that it sees so clearly through the mystery of Divinity that it can even proceed, with the older Boehme, to reveal how the Spirit gives birth to the world. An unconscious God (it is as-

sumed) passes through the stages of this creation until he comprehends himself in the mind of man. Thus a kind of dreamy reflection awards to God a human fate, and to man a cosmic destiny. That an intellectual enterprise of such a character, which really strains human powers to the utmost, should give rise to many intuitions otherwise unattainable, is as natural as that any courageous exploration should discover novelty. It is a mystical mistake which has appealed more than any other to men of genius. Nevertheless its distinguishing characteristic is a lack of patient humility—a lack nowhere better illustrated than in the daring of that last great mystic of antiquity, Plotinos, who believed that the mystical light given to men was luminous enough to uncover the mysteries of creation.[8] He dreamed his artistically beautiful, unrestrained dream of emanation-mysticism. His quietistic spirit retreated into aesthetic peace from a world grown mean. And inevitably his idea was pushed to an extreme formula when the later Stoics and neo-Pythagoreans fancied they could explore the separate sciences by means of mystical contemplation.[9]

Technical Cults

These aberrations from pure mysticism say either too much or too little about the consciousness of God, and sacrifice either grace or the mysterious splendor of the living, working Divinity; a second group of philosophers squander that jewel of the soul which is humility. Instead of an Ontologism that hungers for universal knowledge, these men sponsor attempts to create an ambitious technique of soul-development (Psycho-technique) by means of which they hope, through formulae of self-observation and self-control, to force their way into the state of mystical consciousness.

[8] See page 105.

[9] See page 92.

Even though their efforts may succeed in bringing to light many manifestations of spiritual powers which are little enough observed, especially by complacent moderns,—we may add, parenthetically, that such success has gained for the leaders of contemporary theosophy their great influence over a following which is for the most part intellectually primitive,—it is abundantly clear that they are merely fascinating Yogi tangled up in magical cults and superstitions by their want of genuine humility. They can attract men, but they cannot conquer what for the mystics is "the world." The prototype of many practices which lead to mystical "magic" is Panpsychism, as illustrated particularly well in the system of Averroes.[10] The "All-Soul" is there a convenient means for explaining a magical interrelation between individuals. It is the "fluid" basic to what are called telepathic and magnetic influences. From this point it is only a step to that aberrant Gnosticism which summons the satanic spirit—instead of the "All-Soul"—in a thousand malformations of religious worship. This little noticed movement, which possesses an unbroken tradition from Syrian Gnosticism and Manichaeanism to Parisian suburban satanism, has developed all the phases of an erotic pseudo-mysticism, as may be learned especially well from various late mediaeval accounts.

Nor is magical mysticism made pure when it seeks the true God rather than demoniac spirits. It is always demonstrably superstitious when, giving up the psychotechnical gestures of the Yoga system, it strives to smuggle its way into the confidence of God by means of orphic rites, derived promiscuously from the arts of Hellas and the Orient. Thus, for example, the Theurgology of Iamblichos,[11] despite its

[10] See page 167.

[11] Iamblichos of Syria, who died about 330, elaborated a defense of polytheism. He divided the gods into superterrestrial and terrestrial deities, and

evident genuine thirst for truth, evidences clearly a loss of the sense of spiritual directions. Its praise of unreason, its weird defense of polytheism, emasculates pure and perfect mysticism. Theurgology[12] is an absolute presumption, even though it may have coined intellectual methods and concepts which are of use in a philosophical description of genuine mystical experience. Similar in character is Spiritism, the ordinary vulgar arts of which are called to mind here only because the pseudo-mysticism upon which it rests was twice clearly (and, from a philosophical point of view, in some respects significantly) expressed by Berkeley and Fechner.[13] Berkeley impoverished the mystical idea in a singular way. For him God and the soul abide in majesty, but the real world disappears into Platonic unsubstantiality. Thus the circle of erratic mystical doctrines is brought to a close: the denial of the real world follows logically from the doctrine of emanation as set forth by Plotinos, and Theurgology is the final dreamy finale of the theogonic system as fashioned by the Gnostics. There is, of course, a modern form of error—an "experience mysticism" which believes that the possession of mystical knowledge can be assured by running the gamut of the psychological states and methods of living which seem reserved to the genuine mystic.

The Origins of Mysticism

In refusing to accept these views as correct, one need not, however, deny that a complete realization of the mystical ideal is bound up with unusual conditions of consciousness. It should, of course, be borne in mind that the dis-

then went on carefully to enumerate the members of each group. One of his special purposes was to promote the worship of Pythagoras, of whom he wrote a queer biography. Theurgology may be translated as "magic."

[12] See page 117 for the whole subject of Gnosticism.

[13] See pages 304, 452.

tinguishing characteristic of genuine mysticism is *not* the *quality* of the experience. Every human heart can be awakened to mystical desire, but it must also guard against falling a victim to any of the various kinds of "magic."

Then, too, a truly complete mystical life can be begun but not completed. And so it may be helpful, at this point, to see more clearly what the origins of mysticism are. That genuine mysticism is not knowledge but a saving road towards the First Cause, was perceived by the gifted Lao-Tse. Then the mysticism of Yainavalkya emerged from the pantheistic Hindoo cults and described how the finite self of the soul is overawed by the infinite Self of God. Finally, through suffering received at the hand of the world, and experienced as unbearably painful, the gentle spirit of Buddha arrived at the doctrine of the noble road toward mystical peace. These, together with the often lofty Plotinos, are perhaps the most significant among the men of antiquity who were enlightened by the thirst for eternity and set on fire by the flame of what Christian thinkers call the λόγος σπερμάτικος—"the Word that would be revealed."

Why do we term them all genuine but not perfect mystical teachers? Because they lacked Revelation and the concept of action. They achieved contemplation, but not doing. They knew only one choice: the choice between being subject to the world and rooting out the will. They ended in the peculiar anemia of souls betrayed by earthly love—even though their flame still guides and impresses countless hearts. Perfect mysticism, however, does not crush the will and the soul; it develops and saves them. The whole power of ennobled human volition, which ebbs through the fingers of Buddha, serves the perfect mystic in overcoming the world in the spirit of Christendom. For he sees at the very beginning of his "way" the completed mystical deed of Christ. In that deed was accomplished something that

previously had been only desire and dream. A man without sin triumphed during life over the world because God had been made flesh in Him.

A great deal of false mysticism, moreover, is rich with gropings toward, premonitions of, the truth, even though it recklessly distributes among many unworthy men what could be the property of the One alone. Only Jesus of Nazareth *knew* what is the wisdom of God, and only He saw mystery at its very source. In Him, and Him alone, were fulfilled what a variety of strange mystical sects have attempted to do. No other man so gave himself into ignominy and death; and even Buddha called himself not the Saviour but the "shower of the way." Therefore the revelation of the mystical act of God, and of the Son of Man, has grown naturally into history as the Christian Church. The genuine and perfect mysticism is the Christian mysticism of *victory over the world*.[14]

To this Christian mysticism many modern philosophical systems owe much of what truth they contain. They would never have appeared had not mysticism preceded them; and they are characterized by a habit of isolating a mystical concept and then giving it out as comprehended truth. Berkeley's spirits gain their knowledge out of God, as if they already existed in that state of transfiguration which is to come in the next life. Fichte's "divisible ego" is a category of souls which evolve from the Divine "I am." The leading teachers of German Romantic Idealism were ontologists. All these and more we shall consider later.

Nicholas of Cusa

At present we shall pause to consider briefly the work of the great Cardinal Nicholas of Cusa,[15] who earnestly

[14] See page 15.

[15] Nicholas of Cusa (1401-1464) was born near Trier, in Germany, was

desired to restate the richness of mystical experience in the terms of philosophy. He beheld the world, which he visualized as infinite in the Copernican sense, flooded with the presence of creative Divinity. Therefore, God is (he concluded) that which is greatest. But the indivisible soul also wholly absorbs the presence of God when He reveals Himself to mystical consciousness. Therefore God is also that which is smallest. Again, the soul, having overcome the world, blooms alone like a flower, in patient humility. It is poor and bare of all things. Nevertheless by reason of grace it can take its share of the world's beautiful bounty—yes, even harbor worlds within itself. The light of God is reflected to it from all places, and thus it is made inexpressibly rich. Accordingly he who would express the fulness of mystical consciousness must not fear (said Nicholas of Cusa) to utter what seem to be contradictions about God and the soul. God is the fusion, the solution, of all paradoxes which do not become clear in this life. These dicta of a great Cardinal are easily comprehended when one notices that his doctrine—in this respect quite representative—conceived of mysticism as something loftier than scientific knowledge. The judgments formulated are not scientific: but in the attempt to define the unfathomable, thinking becomes dialectic.

2. Psychological Aspects of Mysticism

Nicholas of Cusa's presentation of the psychology of mysticism is extraordinarily interesting. This psychology is a matter upon which the mystics of all times and countries

educated as a lawyer and then took Holy Orders. He was made a Cardinal in 1448, and died in Umbria. His chief works are *De Docta Ignorantia* and *De Concordantia Catholica;* and he is also remembered for several scientific ideas, notably his astronomical doctrine that the earth turns on its axis. See De Wulf (*op. cit.,* Vol. 11).

are so completely in agreement that a general description of it can be undertaken here. It need not surprise us to find that the subject was treated very early and with remarkable perceptiveness by imperfect mystics; for all men are elected to truth and redemption, and therefore human nature is good soil for the mystical seed. Naturally we must guard against assuming that one who can describe all the empiric manifestations of the mystical state is therefore himself deeply familiar with genuine mystical experience. Psychology can never analyze the gift of grace. Nevertheless he in whom grace is active will reveal certain psychological symptoms. And from this starting-point one can go on to develop a diagnosis of states of consciousness which makes it possible to compare the mystic with the poet or the inventive genius.

States of Consciousness

In so far as we are able to muster historical information about truly representative mystics, we may conclude that the psychologist finds them men exceptionally endowed. Of course he recognizes the deep division that exists between their endowments and, say, artistic talent. He affirms simply that through careful study of important individual characteristics it is possible to succeed in forming a general idea of the mystic. One must not restrict the matter to reflection about "contents of consciousness" and their affiliations: it is highly important to consider "states of consciousness," because it is precisely during the transition from one state of consciousness to another that creatively fashioned expression of mystical experience ripens. Now it happens that the only states of consciousness with which men generally are immediately familiar are sleep and wakefulness, though hypnosis has also been thoroughly investigated. In addition to these there are subtler differentiations which will be found

familiar if they are considered with some attentiveness. Between sleep and wakefulness one experiences states of reverie (not to be confused with sickly twilight consciousness) and of getting to sleep, in both of which we still conserve some of the activities of daytime. The exceptional man is affected by still other states of consciousness. Perhaps the following table will present these clearly:

States of supra-wakefulness:
- Ecstasy—Escape from self.
- Peace
- Exaltation
- Excitation
- Bright Wakefulness

The State of Normal Wakefulness.

States of infra-wakefulness:
- Reverie
- Getting to Sleep
- Dream Sleep
- Hypnosis
- Lethargy

During Normal Wakefulness, the consciousness is busy with the facts supplied by observation, and the immediate present prevails, although images supplied by the memory color the situation a little. The energy of thinking is directed toward rapid comprehension of relations, toward syntheses easily arrived at, and toward immediately desirable purposes. The emotions are placid and rather independent of the centre of personality. The will, which is not in tension, is acted upon by motives directly at hand. The range of consciousness is wide, attentiveness is diffused. This state, which we can term one of indifference, is not creative.

During Bright Wakefulness the soul is also to a very great extent concerned with objective things. But these are

selected by the energy of thought, which works earnestly toward a goal; and they are fewer in number than is the case during Normal Wakefulness. The range of consciousness is, therefore, narrower. Mental and imaginative images are eliminated as far as possible. The emotions are more profound, more intimately in touch with the personality, but still crude and cold. This state of "critical observation" is temperate and essentially unemotional; in it the energy of thinking is keenly active. Analysis, abstraction, comparison—these and other critical functions are exercised. There is no really creative trend. The will is active, being motivated by far-reaching and well-considered purposes. Bright Wakefulness is, therefore, also the state of "reasoned action." The thought, "I myself am thinking," occurs only during moments of rest.

The Higher States

"Excitation is quite different. Here, in so far as the content of consciousness is suggested by the common outer world of things, and in so far as this world is still perceived, it (the content) owes its existence to selection. But this selection is not made methodically or in accordance with rationally standardized points of view. The deciding factor is rather the non-relative individual sensitiveness, or personal receptivity, to impressions which are for the most part immersed in emotion. While experiencing moments of Excitation, mystical genius often sees symbols for—let us say —the sorrows of the world. Buddha, for instance, was overwhelmed by images of the old man, the sick person and the corpse. These genuine perceptions, which come home to a soul in some fashion already inwardly prepared, or wounded by heavy trials, differ from the observations experienced during Bright Wakefulness chiefly in that they do not seem to belong to the outer world of things. They

come in the guise of images, are as immaterial as very clear and colorful representations of great permanence, and can easily be supplanted with these. Colors are not perceived as qualities of an object, but as tints in an impressive picture which is clearly apart from the relations of the world common to all. The observable aspects of this outer world are transmuted into "my own beautiful picture" or "a world of my own." Every trait of this picture has something to say to him who glimpses it—something destined for him alone. Critical thinking, far-reaching in the comparisons it establishes between objects or ideas, is here inactive.

The picture, however, becomes very real—almost a new world. Therefore, the more that intensive attention is directed, searchingly and inquiringly, at particular aspects of the picture so conceived,—the more fully is the whole covered over by the tone of the mood inaugurated by deeply aroused, genuine, pertinent (that is, pleasant or painful) emotions, and the more easily and unnoticeably can this whole be altered. This alteration will not be the result of a sudden determination: the preliminary turning-aside of the mind from the actual outer world to the "world of my own" has established the direction which the will follows. Excitation must not be confused with passive Reverie. In the second state, one's mind is not by any means confronted with significant situations which coalesce so firmly into a single picture, nor are one's moods so intimately fused with the individual characteristics of the picture. The profound and genuine emotions which accompany Excitation are affiliated with the centre of personality and are experienced as directly related to the ego.

Exaltation is the condition in which the separation from the common outer world is completely effected. *Reproductions* of the selected and emotionalized perceptions which

prevail in Excitation (not these perceptions themselves) appear in the form of images, or thoughts—that is, thoughts which encumber, pertain to or complete, and even take the place of the images. Attention is forcibly concentrated, and the range of consciousness is greatly restricted. The "ego" takes its part in the "new world," appearing as suffering, sent or chosen. Emotional life is passionately aroused. The energy of thinking is not applied to business which lies beyond the confining circle of the restricted consciousness. Vision is expected or experienced. The attitude of the will is one of resolute readiness. The spiritual bond is intensive synthesis. Imaginative phantasms, freed of their service to memory, coalesce organically into significant units, into symbolical forms. Uninfluenced by any kind of observation, thoughts arrange themselves into pliant systems. If the world thus seen "exaltedly" were regarded as a *likeness*, instead of as an *interpretation*, a magical philosophy would be created. Reality would then be governed (for this philosophy) by the laws of vision, by dissolutions and transmutations, by strange fusions and minglings, and not by mechanical causes. We must add that questions about the ultimate origin and genuineness of visions perceived in a state of exaltation cannot be answered by psychology.

Peace is a state in which the range of consciousness is narrowed still further. Perceptions—and images—remain below the level of attention. There is also an utter absence of thought activity in any manner intensive; and the storm of passionate feeling has completely abated. The moods most noticeable follow one another and may be termed contentment, consolation, acceptance. They are the most central moods, which satisfy more than any others the core of the personality, and may be described summarily by the word "peace." Together with whatever else may form the content of "peaceful" consciousness, they are experi-

enced as possessions exclusively individual, as qualities of the ego which rests within itself. In no other state is the ego so certain that it experiences itself in all things. The descriptive terms employed may be any one of the following: to experience one's self; to know about one's self; to be sure of one's self; to understand one's self. This identification between *experience of the ego and knowledge of the ego* is a phase of consciousness too unique to justify any attempt to designate it hastily with current catchwords.

Ecstasy is the psychical condition in which the range of consciousness is restricted to the utmost. Attention is entirely abstracted from derivative contents of consciousness. The meditating ego abides alone, stiffens under the influence of concentration, and is itself the object of attention. But the thought, "I am I," is no longer arrived at. Certainty of self gives way to forgetfulness of self, consolation to indifference. Then the secret of the mystical life is on the verge of being revealed to the soul. But psychology cannot determine whether or not God is near.

Parallels

The parallel existing between all the states of supra-consciousness and certain allied states of infra-consciousness is worth noting. Nevertheless excitation must not be confused with Reverie, Exaltation with Dream Sleep, Peace with Hypnosis. None of the infra-conscious states are attended with constantly intensified experience of the ego. From a more practical point of view as well, there are interesting divergencies. States of supra-consciousness are conducive to production; normal states are, properly, critical; and the infra-conscious states are receptive. A definite boundary area lies between Normal Wakefulness and Bright Wakefulness; and by taking cognizance of this one may define the first as passive and the second as active attentive-

ness. It is also possible to enumerate human types particularly adapted to one or the other state of consciousness. Ecstasy is proper to the mystic; lethargic self-hypnosis is characteristic of certain Quietists, and Peace is the treasure of the saints. The state of Excitation is normal to the artist; receptive Reverie qualifies the lover of art. The scholar is brightly awake, and his pupil is normally awake. Indeed, if we refused to distinguish between supra and infra states of consciousness, it would be impossible to tell an artist from a man pursued by hallucinations. Such comparisons between men inwardly rich and inwardly poor might be carried farther. For example, the prominence of a state of consciousness is a determining characteristic of peoples and epochs. The old Hindus were ecstatic, and the Hebrews of the Old Testament lived in a state of Exaltation. The modern skeptical European, however, is brightly awake. Accordingly (if we accept the analysis made), the Hindus and the Hebrews were creative, but the modern skeptical European is not.

The States of Creative Expression

Three supra-conscious states—Ecstasy, Peace and Exaltation—bear within themselves the urge toward creative expression. The creation that is to ripen is aided most of all by the state of Excitation; but its *form* will be largely determined during Bright Wakefulness, while its *final symmetry* is dependent upon Exaltation. We have already considered some of the mystical developments of consciousness of self which grow out of the two highest states, and it remains to be added here that the third highest also implies a basic religious perception. God, the soul and freedom are the discoveries proper to the three states. The two highest have this in common that an attempt to speak of them implies that they no longer prevail. He who wishes to discuss

them consecutively and effectively must make the very first experiences encountered in them the starting-point of deviation to artificial creation; and therefore all the great mystics have been lyric poets. It is difficult to describe ecstasy, because recollections fade and coalesce during transition from one state of consciousness to another. But if this rule did not govern memory, *creative artistic expression would be impossible.*

The mystical state of Ecstasy comforted the saints. They soon discovered, however, that it could not be counted upon as lasting bliss. Peace is also not permanent. Its image likewise pales in the memory: he who awakens from it remembers only the gulf existing between the man absorbed in contemplation and the man engrossed in the normal everyday. Those who have lived in a state of Peace are therefore seized with an impulse to express and form their impressions, to reflect upon what has happened to them; and when they are prophetic by nature, the impulse lifts them to the state of Exaltation. But of all the states it is Excitation which (as we have seen) develops most strongly the urge to speak or to fashion images in pictures or language. It prevails among all gifted personalities as the state of the formative creative act. This urge to speak is first highly determined and active, but is soon spontaneous and irresistible.

The visionary content of the state of Exaltation is so varied that although one may to some extent gather religious insight from it, one cannot associate the insight with the state in the same way as consciousness of the Divine fundament of life can be associated with Ecstasy, or certainty of the soul with Peace. The two perceptions last mentioned are so closely associated with their proper states that they invariably return with them. The individual visions, however, change with every new state of Exaltation. Nevertheless there does develop in this state a conviction which

becomes more stable with every time the state returns. It is the intimate certainty of free will as a constituent of self. Because he who is in the state of Exaltation experiences himself as living in *his* world apart from the world *common to all*, he also experiences himself as not influenced by any *motive coming from without.* Normally his reasons for acting are seen to lie mostly in the past, and his hopes are in the future. In the state of Exaltation, however, past and future are dissipated. The present alone exists. Only the ego is causative now. And with this conquest over the outer world, comes victory over its antagonistic forces. Naturally the philosophical problem of knowledge regarding freedom is not solved by the experience gained in Exaltation.

Clarification

In contrast to Ecstasy, Peace and Exaltation, the state of Excitation does not of itself furnish any religious insight. It does not, moreover, suffice for the completion of artistic creation, of which the mystic has need in order to express himself as fully as he may. Excitation is, in so far as the creation of beauty is concerned, a state of receptivity. It does not urge the gifted individual to expression. But when this individual goes from it to Bright Wakefulness (critical reflectiveness), he remembers so much of the experience gained in it that he recognizes the unripe and chaotic character of the images and situations accumulated, and sees that they will profit by a process of maturity. Great religious interpretations of the world, it is well to note, have the impressive effect of works of art and the symmetry of philosophic doctrines. If they be conceived in the state of Excitation, they gain solidity through the separation by critical attentiveness of the *idea* from the *impressive effect* of the idea, because of the fact that moods which prevail during Excitation are highly individual in

character. Since the isolated situation is closely observed by concentrated attention, is unaffected by disturbing perceptions, impressions, or (even) criticism, it becomes part of an aesthetically real world that is impressed indelibly upon the memory. As a consequence this interpretation of the world is reproduced (even though more dimly) whenever occasions present themselves, and so governs, with constantly increasing surety, the reflective mind of the creative person; and furthermore, it is always ready for the formative effort of the mind and does not have to be reconstructed laboriously if, years afterward, there should be a need for it. Finally, it continues to develop even though it should be temporarily forgotten. Something which was wrestled with strenuously the day before is often found to be more definite and clear the next morning, even though one cannot account for the change.

Images

If a great creative idea really comes to a mystic during the state of Excitation, it is not fortuitous that the speech in which he expresses it is imagistic and shows a marked preference for the use of comparisons. The image, heavy with meaning, helps to ripen the creative idea. Such ripening does not begin during the many distractions of everyday existence, but during a state of infra-wakeful reverie. The image adopted is ceaselessly flooded with everything that is associated with its details. Of course much that is extraneous to the idea as such must be rubbed out again later on. Nevertheless associations and intuitions present themselves which are superior to all the concordances and comparisons of critical reason: they are remote from and improbable to this reason, and precisely therefore so profound and fruitful after they have been clarified. Should they be expressed in effective language, there will live in them a

tremendous power totally different from what can be found in the temperate discourse of scientific knowledge.

The more richly intuitions press themselves upon the creative genius, the more deeply is he plunged into Dream Sleep, in which the range of consciousness is narrower than it is in reverie. Finally creation takes the place of cumulative suggestion. The amassing of psychical material gives way to an increasingly strong desire to begin one's own creation in the form of pictorial or linguistic representation. Soon the creative man submits to this desire, and proceeds to work after having summoned up all the power of his will. He is active in a task which he himself has imposed upon himself. Meanwhile, however, the fullness of his conceptions lifts him from the state of Excitation to the state of Exaltation.

Awakening from this, the creative genius finds himself a stranger in the presence of his work. He can, therefore, observe it carefully and critically. Thus the great mystic, in such hours of awakened attention, derives from self-criticism the help needed to cleanse his statement of mystical experience of those various imperfections which can be summed up under the term "magic." He does not flatter himself that all his experience has been Revelation. Indeed, he knows that there was time and room in the states of infra-consciousness for the entrance of philosophical considerations. Religious genius *can* experience Revelation—if God wills. The psychology of mysticism cannot decide when such experience takes place. God knows, and with that enough has been said.

CHAPTER VIII

FRANCISCAN PHILOSOPHY: THE PREPARATION FOR MODERN NATURAL SCIENCE

We have now come to a critical transition point in the history of philosophy. A synthetic system of classical philosophy had been diligently and carefully handed down through the thirteenth century. But important groups of thinkers had gone their own way apart from the classical idea, they themselves scarcely being aware of how much use they made of a tradition they considered unsatisfactory. Thus the anarchy of modern culture, which is today complete, was begun. This fact must be understood just as we must be ready to appreciate whatever ideas were accumulated by the dissident thinkers, despite their constantly increasing confusion and their frequent overemphasis of one-sided theories.

To begin with, there appeared a division of thought into a philosophy of knowledge and a system (or systems) of natural science. Both these separate movements were unavoidable, and indeed both were highly desirable. It was regrettable, however, that both should have been sponsored by men who declared war on classical metaphysics in the name of modern discovery. These men were neither creative minds nor inventive discoverers, neither first-class students of nature nor brilliant critics of knowledge. But they made a great deal of noise, and it was often difficult to hear the low voice of genuine investigation over and above their clamor. This phenomenon of "noisy propaganda" was,

however, only the symptom of a deeper disarray which manifested itself in a second-hand appropriation of theories about the world as a whole.

During the era of Thomas Aquinas, the experience amassed by antique observation had been brought into order and a system of philosophy that was wide in scope had been built up. Instruments of thinking were available for the further exploitation of experience; and the task of accumulating more experience developed. Towards the accomplishment of this task many very able minds began to direct their attention. They had also to consider critically the instruments of thinking which were to assist them. But no human endowment is adequate to carry on the three great endeavors of knowledge simultaneously:—that is, to stake out the limits of knowledge, to discover new data through study of nature, and to complete philosophical syntheses. The work therefore soon proved greater than the worker. But he was often misled, by a perfectly natural current of human weakness, to suppose he had done everything when he mastered one of the three great endeavors. And so, instead of associating himself with fellow workers in other fields, he developed contempt for them.

The Preparation for Natural Science

At the close of the Scholastic period, adequate preparation had to be made for modern natural science. This was accomplished by the Franciscan philosophy. We may note in passing that the nineteenth century loved to ascribe to itself a particularly deep understanding of nature—a virtue which, it was assumed, had begun with Rousseau. But this was merely a fallacious notion which grew out of the fact that only antique and romantic poetry had been compared, and that the result had been expanded into a generalization. Anyone who has viewed the environment of a Benedictine

monastery with his eyes open will realize the emptiness of the nineteenth century's self-praise. The spirit of genuine mysticism has always been emphatic in its praise of the charm of quiet natural beauty. It is really not difficult to decide whether the disciple of Rousseau,[1] in his elegant salon, or Francis of Assisi [2] lived in finer intimacy with created nature. To Francis the birds of the air flew confidently. From his lips there really came the spontaneous melody of nature, praising the pure fountain and the clean bread of humility. The sun became his sister and the wind was his brother. With both he lived in familiar companionship on Monte Averno. He met the animals cheerfully, and he did not forget to include Brother Man in his world-wide affection.

* * * * * * *

Roger Bacon

Roger Bacon,[3] a disciple of Francis, pointed to the two great keys with which human experience enters the realm of nature; the experiment, and the mathematical calculation of experimental results. Both of these keys, it should be noted, imply restriction of naïvely direct observation. Instead of the wide world and its confusion, the experiment posits a wholly artificial world of the laboratory, in which all objects are fashioned after ideally conceived geometric quantities. A small number of artificially simplified things

[1] See page 371.

[2] St. Francis of Assisi. See the *Fioretti.*

[3] Roger Bacon was born at Ilchester, England, about 1212. He studied at Oxford and later in Paris. Sometime in the neighborhood of his fortieth year, he entered the Franciscan Order and began to teach at Oxford. All his life as a Friar was spent in continuous battle with his superiors; and it is probable that only the interest of his friend, Pope Clement IV, made possible the completion of his treatises. His chief works are: *Opus Majus, Opus minus,* and *Opus tertium.* No doubt he was a strange personality, far in advance of his time.

are there isolated and brought into relationships which he who conducts the experiment has carefully planned. The intricate network of conditions imposed by nature is systematically cleared away. Mathematical calculation, for its part, seeks to reduce to the smallest possible number the elements out of which theories may be constructed. Of these residual few accurate knowledge is assured by careful description.

Scientific Terminology

Logical preparation for natural science was also an achievement of the Franciscan school, particularly in its English branch. The "critical Nominalism" of Duns Scotus [4] and Occam made possible the terminology of the modern physics. A growing interest in mechanics had urged men to explore and clarify the laws of movement. Then Solesme gave to posterity ideas of homogeneous and heterogeneous, of accelerated and slowed-up motion. Particularly important was his definition of fall as "a homogeneous accelerated movement"—*motus conformiter difformis*, as the Latin says. A metaphysician, who bases his conclusions about substance upon reliable experience, must of course be interested above all in ideas which affirm the *universal* nature of the objects known. It would, obviously, also be

[4] John Duns Scotus, surnamed Doctor Subtilis, was born in Scotland. The exact time of his birth and the name of his birthplace are not known; but he was admitted into the Franciscan Order in 1290, when he was still quite young. He was educated at Oxford, familiarized himself to a considerable extent with the sciences, and was licensed to teach. Paris and Cologne became the scenes of his greatest activity, and in the second city he died during 1308. His most important works are two series of *Quaestiones;* and his authorship of several volumes customarily attributed to him is now doubted. See De Wulf (*op. cit.*, Vol. II). The tradition that Scotus affirmed the Immaculate Conception of the Blessed Virgin Mary—see Gerard Hopkins' poem, *Duns Scotus*—is now discountenanced by some critics. Harris' *Duns Scotus* is the best and most comprehensive treatment in English.

possible to describe these objects arbitrarily according to their *accidental* characteristics; but such a method could not satisfy the metaphysician. The student of nature, entering realms unknown, must, however, be content with accidental characteristics. He must take hold of the new thing by the side which it first presents to him. Therefore he makes it his first business to assign to the object, which is worth investigating but is still essentially unknown, an unequivocal and perfectly definite symbol. Again, the object which attracts his attention first makes its appearance as a *single* phenomenon. He is as yet unaware of its connection with other objects in the cosmos. Therefore he abandons the idea of discovering *being* and begins modestly with *purposive assumptions*, the proof of which he hopes to establish. This inventive struggle with shrouded nature naturally seems more active than philosophic meditation.

The love of doing which characterized the Friars Minor had a great effect upon the development of their kind of study and evaluation of personality. Experiment is a variety of investigation which calls for much active energy. During the progress of research, presuppositions and one-sided convictions change. The reality of individual substances, forces and forms of life therefore impressed the spirit of the Franciscan student, who rightly remained conscious also of the basic uniqueness of his own nature. Self-reflection like his did not, however, lose itself in those hyper-idealistic dreams out of which newer scientists have sometimes fashioned their concepts of universal law. He preserved a noble respect for this law, which he accepted always as the expression of the Divine will.

To conceive of the doctrine of the Franciscan school merely as something that was in opposition to the Dominican system would be to misunderstand it. In the final analysis, the two can be reconciled. That the investigation of being

in a universal sense always leaves a certain amount of bare individualistic reality undescribed, is a profound truth that ought never to be lost sight of. It was recognized by Thomism. The gulf between universally correct judgments of being and detailed descriptions of individual objects, conducted for the purpose of determining their worth, is especially great where complex and perfected actuality enters into view, and greatest where there is question of human personality which is always "this one" and no other.

Duns Scotus

The individualistic description, however, by no means excludes a consideration of being as such. The method of investigation formulated by Duns Scotus prepared the way for natural science; the Thomistic method led to the construction of a metaphysical philosophy. Therefore the two differ in tendency, and that is all. The difference becomes especially apparent when the science of life is dealt with. Duns Scotus taught that a "vital force" shapes the body (that is, a "force" apart from the spiritual soul), thus opposing the Thomistic view of a formative soul. Here he methodically separated, in a manner serviceable to natural science, the subject-matter of physiology from the subject-matter of psychology. Of course this distinction must not be applied in a broad philosophic sense and taken to mean that body and soul are ultimately apart. If this were done, no exhaustive description either of vital processes or psychical experience could be made. An epoch later than Duns Scotus proved what manner of dualism could be erected upon his method—a dualism which estranged the body and the soul, and then patched them together again.

Something similar could be said about the highly intelligent Scotistic psychology of the will. It can best be evaluated if it is seen as the complement of Thomistic teaching.

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Scotus' life-loving emphasis upon the value of the active personality was a corrective of pale intellectualism. The earthly goals of mankind are, he said wisely, not staked out by knowledge alone. But it is also true that the will is not weakened by the fact that reason, which weighs values, guides its decisions; and no such weakening is to be deduced from Thomistic doctrine. What Duns Scotus considered the determining factor is the fact made known by the psychology of motivation, that a resolve which is being carried out impresses representations of the goal it seeks upon the will prior to further separate resolves—impresses them on the will as motives counter to passionately urgent outer motivating causes. *Interior* motivating causes, in the sense of directions or principles of the will designed to develop the personality, therefore offset the unregulated *outer* motivating causes. Thus room for the play of free self-expression is created. This doctrine by no means implies that free will operates whimsically without reference to reason. But clearly Aquinas went more deeply into the problem of the reasoned decision of the will than did Scotus. Although one can foretell the acts of a saint more easily than those of a sinner, one cannot conclude that he who acts according to reason is less free than he who does not.

Thomas held that natural law depends on the mind of God, who commands certain actions because they are good; Scotus made that law dependent upon the ordinance of Omnipotence. We cannot say that the Franciscan doctor was wrong, but the great Dominican seems to have gazed more deeply into eternal Mystery; for God does not suffer diminution of the almighty power of His will because he acts according to His eternal wisdom. It is pleasant to note how Scotus' lovable confidence that the help of grace for the strengthening of the will would not be refused to any man who freely and earnestly desires salvation, tempers certain

hardnesses of the Augustinian mysticism of grace which occasionally appear in stern guise in the Thomistic teaching. Finally, it is worthy of notice that Dominican investigation emphasizes theory primarily, while the Franciscan system is more concerned with practical theology. Here especially the two complement each other helpfully.

Occam

On the other hand, as soon as the bluntly made division between theological and philosophic method, between metaphysical and scientific habits of thought, led to the point where the antecedent, hypothetical interpretations of experience that were proposed by natural science came to be set forth as philosophically complete judgments about cosmic reality, there began (with the teaching that truth is twofold) the modern anarchy of the spirit. This danger Occam,[5] the brilliantly gifted theoretician of the terminology used by natural science and the precursor of the English "age of enlightenment," did not escape. He transformed the "critical Nominalism" of Duns Scotus into a code of symbols which has been of service to the sciences but remains applicable to them alone.

Occam's first thought was given to the content of observation—the perceptions which could be tested later on. These

[5] William of Occam (or Ockham) was born about 1300 and died about 1348. He was educated at Oxford and became a Franciscan, but the degree of Master was withheld probably because of the suspicion in which his views were held. He taught in Paris, then joined the opponents of the Papal temporal power, was excommunicated, and sought refuge with the Emperor Louis of Bavaria. It is probable that his last days were spent in Munich. The title often associated with him—*Doctor Invincibilis*—is due to the fact that his works probably escaped condemnation because of the great difficulties involved in their interpretation. Bishop Turner (in *A History of Philosophy*, page 407) says that Occam "defended in his controversial writings the principles subsequently invoked by the first reformers to justify the encroachments of the temporal power."

are, he said, reality as we know it. That objects are really like perceptions seemed to him so great an assumption that it ought not to be taken for granted immediately. And so, during the very beginnings of the terminology of natural science, that comparison between forms which just a little previously had been found fruitful, was abandoned. The Protagorean teaching of the subjectivity of sensory qualities was revived. This teaching remained associated with nature study up until the time of Goethe. Today we realize that it had a certain value as an hypothesis. Occam, however, did not by any means regard perceptions as flitting dream pictures lost in psychical mist. Sensation, he thought, was a *sign* of the presence of a thing. In so far as there was appearance, in so far also was there announcement of reality. The objects of investigation worth knowing were therefore (he thought) only preliminarily known through the sensory announcement. In order to know and describe them adequately, one must ascribe to that which is essentially for the most part unknown, a suitable sign. To similar sensory signs are to be attributed, therefore, defining signs having the same meaning. And so that which remains unknown as a fact can be comprehended in this roundabout way.

Occam thus formed that "night-time view" of nature which ascribes light and sound to the psychical universe, and leaves in the material world nothing but measurable movement of unknown thing-particles. The first part of this doctrine, consequently, has to do with observation; the second with the simplest possible definition of comparable sensory signs. Psychological criticism of knowledge thus substitutes for the knowledge, by a form-perceiving soul, of objects determined by form, the element of stimulation and the psychophysical transmutation of this stimulation. Universal judgments, which express the results of comparisons, apply only indirectly to the real and thoroughly indi-

vidual single object, and therefore do not exhaust the description of objective things.

However fruitful such a method may be for the inventive and discovering study of nature, just so one-sided is it proved in general use. It rules out experience, no matter how attentively realized. Because it does not go deep, in the philosophical sense, but contents itself with an immediately serviceable description of the surface of the world, it ignores the constant existing harmony between that which is known and that which knows. And this harmony is based on the fact that our daily perception of the world is derivative, in the ultimate analysis, from an eternal Personality.

BOOK TWO: THINKERS OF THE RENAISSANCE AND LATER ERAS

CHAPTER I

THE TRANSITION TO MODERN THOUGHT

1. The Renaissance Personality

Though solitude prevailed in monastic cells, the individual thinkers who lived during the high noon of Christian philosophy were not victims of isolation or meaningless specialization. A constant tradition that had been ennobled by a vision of more than earthly loveliness and truth bound them together, was to some extent the root out of which they came and flourished as branches. But the specifically "modern" philosophers who followed them defined their work as being without precedent, and hoped to guarantee freedom of opinion by cutting loose from tradition and establishing new and personal thought foundations.

It is evident, we now believe, that this modern program is necessarily larger than the power of man can carry through. The definite characteristic of philosophers who have accepted it is isolation. Their words reckon with some particular time, not with timelessness. A thinker emancipated from affiliations with the past is, by the force of genius, able to express the especial error of an era and to tell that era *its* truth—that is, to convey the interpretation of truth which harmonizes best with existing preconceptions. Always he is driven by the very nature of his

Note: The following volumes of reference may be named: C. M. Bakewell's *Philosophy of the Renaissance;* W. Windelband's *Geschichte der neueren Philosophie* (Vol. I); R. Falkenberg's *History of Modern Philosophy;* W. Turner's *History of Philosophy.*

attempt to identify his theory of the cosmos with reality. It is little to the point that throughout the modern era a poetic, a religious impetus frequently accompanied the appearance of newly born philosophic universes. Nor is it surprising that some of the heritage of a past rich with complex creative activity in philosophy should have been incorporated, almost unconsciously, into new systems.

The Division of Thought

Franciscan pathfinders in the exploration of natural science initiated, as we have seen, the division of philosophic labor between critics of knowledge and students of experience. Soon the scientific task had simply overwhelmed the individual investigator. An era of explorations triumphed in the conquest of new experience; and it was natural that he who discovered a part of the earth should fancy he had found a new world. Every new method, every novel invention, considered itself the only fruitful one. Each found its press-agent. The new-born philosophical theories also trickled out of the stream of *thought* into the broader sea of *culture*. And thus the modern mind, with its mingled bright and shadowy aspects, came into being.

In constantly increasing measure, philosophic ideas influenced schools of art. Æsthetic judgment came to vary with the popularity of systems of thought. Noble or mean ideals, passion or submission, were prescribed for the civilized world by philosophers. Literature loftily conceived, especially the great works of favorite writers, were weighted down with metaphysics. Dante and Calderon, Shakespeare and Goethe, Leonardo da Vinci and Bach, cannot be understood without recourse to pure philosophy. This philosophy itself, in so far as it is modern, can be evaluated more satisfactorily and clearly if the great world-poems (which are a

kind of metaphysics of the second order) are taken into consideration. Yes, even the practical action of those characters who have made modern history was, in the final analysis, dictated by the philosophic demands of the epoch in which they lived. Though the direct expression of public opinion has been the political catchword throughout recent centuries, its quintessence is philosophical in some degree. Thought thus proved itself unmistakably the strongest, even if not the most immediately effective power in history. Philosophical and political battles were fought out in unison. It is therefore abundantly clear that philosophy can never successfully deny its essential character as a "doctrine." Equally evident is the fact that the modern time, characterized by the unavoidable division of the labors of thinking, has also been the era of religious struggle.

Personality

The modern Renaissance [6] personality strove with unabating energy to reach its personal and particular goal. Its astonishing discoveries and near-discoveries seemed at first sight to oppose uncompromisingly the older, traditional

[6] The term Renaissance, properly applied to the revival of humanistic learning (by which study of the classical writers is meant), is used to cover the period of transition between the mediæval and the modern eras. One may divide this period into two parts: first, the fourteenth and fifteenth centuries, during which there was a great awakening of interest in the architectural and literary remains of antiquity, and in which leadership was almost exclusively in the hands of Italian poets and artists; second, the sixteenth century, during which the movement spread westward and northward. It is, of course, one of the most interesting and widely discussed epochs of history. Some of the following books dealing with it may prove interesting: L. Batiffol's *Century of the Renaissance;* A. Baudrillart's *The Catholic Church, The Renaissance, and Protestantism* (a compact Catholic view); J. Klaczko's *Rome and the Renaissance* (concerned chiefly with art); H. Wölfflin's *Art of the Italian Renaissance;* W. Pater's *Renaissance* (not always accurate but stimulating); S. Dark's *Renaissance* (compact and popular); J. A. Symonds' *The Renaissance in Italy* (7 Volumes); and Burckhardt. *The Civilization of the Renaissance.*

doctrines. The connection between the two, often obscure at the start, was not calmly and carefully sought out. Men lacked the patience to permit their ideas to grow and ripen. *The thing wanted had to be made*, and in a hurry. This may be a satisfactory method of procedure in some instances, but great and sublime truth is never pounced upon accidentally. The unrestrained, unresting Renaissance personality was, therefore, sovereign even in its errors. It considered its own brain the court of last appeal in the adjudication of truth, and its own heart the source of reliable standards. Whatever was not regarded as worthy by the individual reason, was tossed aside as simply not true; whatever the individual will decided to do was voted eminently desirable. Originality seemed more important than truth.

Even today anyone who attacks the ideal of the free, natural, sovereign personality will mortally offend the modern man—which does not, of course, establish the ideal as genuine. We may even say that Europe must thank this idol for the gradual collapse of its speculation and for the fractionalizing of its views of the world. Today we live in a state of complete anarchy in so far as thought about the universe and man is concerned. The motto of any hopeful philosopher must now be "patience," even though he realizes that there is no room for such a maxim in genuine science. For the more definitely a branch of investigation becomes a science, the fewer are the opinions which can be tolerated concerning it. Who would speak of "sovereign opinion" in the field of mathematics, or consider such a thing wholly sane? The goal of all real science must unquestionably be to countenance only the truth and to dismiss all idle claims to originality. Equally much must the philosophical summary of the sciences aim to establish one true opinion rather than a thousand contradictory opinions. Consequently the "sovereign personality" is something for which there is no

room in the workshop of thought. But it did determine the development of thought during the Renaissance and thereafter.

Dante

A unified and individual personality is not, of course, necessarily the product of philosophic chaos. The most passionate personality that ever hungered for knowledge, Dante Alighieri,[7] attained full stature while practicing humility in the presence of universal truth. He belongs to the first springtime of the Renaissance, and is the founder of the Italian spiritual hegemony. This would be followed later on by the hegemony of "enlightenment" in England, and by the hegemony of Romanticism in post-Kantian Germany.

What our present finds strange about Dante is his greatness as a man and his conviction that poetry is content as well as form; his humility in the presence of truth; and his lack of self-will in the conduct of investigation. His was a firm and illustrious personality, meriting earnest respect rather than hollow praise. Is not even his unparalleled fidelity to youthful Platonic love individual and sincere? It was this love which gave a soul to the melodies of the troubadours, which made these more than idle jingles, and which placed words of faith on the lips of truth. Nor was Dante, who faced his enemies in civil strife and foreign war, a woeful, dreamy soul estranged from the world. He unified his people by transforming its primitive vulgar babble into

[7] Dante Alighieri (1265-1321) is the poet in whom, as Ruskin says, one sees "the central man of all the world." Though standing at the beginning of the Renaissance, in many respects he transcends it. Those who do not know him or his work, may find stimulating introductions to it in books by H. D. Sedgwick, J. Slattery, J. B. Fletcher, C. Grandgent, C. A. Dinsmore, E. Hasse. Friends of Dante will, of course, possess their own bibliographies.

a melodious mother tongue. The marvellously colorful, almost tangible, pictures of his world-poem grew out of unerring observation. That exalted joy in the presence of spiritual loveliness which rests upon his Elysian meadows was the product of firm thinking. Nor does one doubt the depth of Dante's sympathy with Giotto,[8] the painter of St. Francis, or with Jacopone,[9] the minstrel of holy poverty. Dante the righteous statesman is also illustrious:—greater by far than the Roman who coldly shed the blood of friends. He endured with nobleness the collapse of all his political hopes, exile, and the death of his emperor. No man ever went his own tragic way with a more resolute step.

This thinker who sought truth was an enthusiastic admirer of the Thomistic synthesis. To Dante philosophy was not a tame academic trade, but a passionate affection for truth. Knowledge attended with earnest meditation of the ultimate problems of life was his consolation in the midst of a sorrow no ministration could heal. Reading himself almost blind after the death of Beatrice, he gained an intimate familiarity with the methodology of the ancients. Nobody understood more thoroughly than he that faint shadow of permanent melancholy which rests upon the beautiful Elgin Marbles. He, the man of battle, chose for his guide Vergil, the poet whose timidity was almost that of a girl; and thus led, he saw his vision of history through to the end. He beheld Providential Wisdom impelling Rome to the pinnacle of its worldly might, and building up the universal empire so that Its own purposes might be accomplished. The Roman state was only a foundation laid for the activity of

[8] Giotto Di Bondone (1276-1337), a Florentine painter, sculptor and architect. See B. Berenson's *Florentine Painters.* A portrait commonly assumed to be that of Dante is attributed to Giotto.

[9] Jacopone da Todi (1230-1306) gave up the practice of law, distributed his goods among the poor, and became a Franciscan. He was a mystic, a poet, and to some extent a rebel.

the Christian spiritual kingdom. The just reason of Vergil had discerned the temporal destiny of Rome; Dante, in the light of Revelation, comprehended Rome's eternal fate. And thereby he formulated a new, transcendent concept of human government.

Stern with himself to the point of asceticism, seeking justice after the manner of a conscientious statesman until the hour of his banishment, a poet because he lacked the opportunity to attempt more masculine deeds, Dante ripened into the judge of his own time and beyond that of all times. Thus he became the foe of those who flee responsibility—of all who would decide for no deed, no view of life, no standards excepting those established by merely clever selfishness. He lashed with scorn those whose chosen realm is slime—whose spirits have capitulated to matter. He hurled all traitors to icy dooms, because they had bartered their souls, their friends and their disrupted fatherland. But the nobility of his character enabled him to feel a gentle pity for those who had fallen by reason of profound amorous passion or overpowering ambition. Finally, in his vision, the man who had raised himself to do battle with God was consumed like a livid coal, damned and isolated by his own will. It is, in short, the whole meaning of his panorama of hell that the individual acting for the sake of self finds that his success is his punishment. Those who remain indifferent to a just sense of values are blind to the meaning of the present and clasp to their bosoms a timeless future of misery. Self-will plunges them into the ship of Charon.

When Dante (in his poem) came back to the light of the stars, he heard the merciful words: "I condemn no one." And just as the voyage through hell was for him a way toward salvation, so the experience of the *Purgatorio* cleansed him in his mystic flight from the world of time. His verses repeat over and over again images which have

an undimming significance:—for instance, every evening the angel drives away the serpent of temptation. Bowed by Franciscan humility and awed by the radiance of spiritual beauty, Dante overcame his fierce pride and walked steadfastly through the fiery grove in which the purgation of love is accomplished. Knowledge became his final reward in the *Paradiso*. The sources of this knowledge are, as he sees them, first of all personalities, then their great books. No reasonable man will, of course, interpret every passionate outburst of the poet in an allegorical sense. But neither will anyone neglect the voices which participate in the harmony of knowledge; Vergil's poetry, which is rich in premonitions of truth; the healthy human reason of Statius; Beatrice's expression of the treasures of Revelation; Bernard's mystical contemplation. In the sunny heaven where the glorious doctors abide, Bonaventure lauds the noble sense of truth which guided Dominic, and Thomas praises the clarified love of Francis. Into nothing does Dante's poem gaze more deeply than into the individual characters of the mighty Scholastic thinkers. The poet's life-work thus reposes upon a majestic coördination of values—upon a cosmos radiant with the manifest ordering of truth from the lowest abysses of the icy night of abandoned hope to the beatific vision in the light of glory.

Note how this evaluation of values is hierarchical, being the product of reasoning perception and not of wilful likes or dislikes, of utilitarian gain or superficial disadvantage. Dante profited from realistic study of the world in the sense sponsored by Aristotle, the calm surveyor of the ethical nature of man. He preserved an attitude of humility within the boundaries of research, as the example of Aquinas had recommended; and he was lifted up by believing acceptance of the mysteries of faith, after the manner of Augustine. But it is a fundamental characteristic of Dante that he

thought of the system of values as something that ought to be realized on earth. To his mind Cæsar was to be given the things of Cæsar, but on condition that he remained a son of the Christian community. In the end he learned from exile the love of mystical consciousness. Finite phantoms of time and space vanished before his gaze; and in a rose of heavenly beauty throngs of blessed spirits came into view, bringing with them knowledge and enduring peace. In no other modern personality has the flame of critical reason burned more brightly, in none other has there existed a more virile thirst for the sources of manifold goodness. Out of his own misery, Dante arose to find the Christian answer for the doubts and problems of man.

2. The New Ideal of Nature

The men who heralded the Renaissance were all stirred by a profound desire for knowledge of nature. They did not at first meet with great success in physics, being as they were quite without advantageous methods. By comparison Florentine wit and keen observation succeeded far better with the details of psychology. Though Dante, for instance, had made researches into the nature of earth and water—that is, into what we term hydraulics—these are patently of little value compared with the psychical portraiture which was the product of his study of men. Perhaps it was no mere coincidence that the first important fruits of Renaissance nature-study were revealed in another series of portraits developed by a new art. Dante's friend Giotto shared his passion for ethical dissection. That is apparent from his allegories of the virtues and vices.

Painting and Literature

But the "moral likeness" which Dante the poet charged with life, by reason of the fact that he was concerned with

great personalities struggling for virtue, remained colorless, bloodless in the hands of Giotto the painter. It was the secret of Giotto's art that it could discern the countenance of a great and holy man—that it could paint not virtue but Francis of Assisi. And so it is not strange that its master should have gone on to explore and celebrate the marvels of nature. Giotto Bondone, the builder of the most charming of all bell-towers, regarded earth with that same warm-hearted affection which had characterized the Poverello. Nevertheless he could not ignore the terrible wit and unequivocating observation of Dante. As a whole, therefore, the new art of realistic experience of human nature in its forms and deformations was enriched by love of heavenly and earthly things, as well as by the mordancy of satire. The lyrical ecstasy of Jacopone da Todi mingled in unparalleled fashion song, joy, tears and the zest of battle. Petrarch,[10] the shy dreamer, the heir of the troubadours and the perfector of the sonnet form, is an unusually illuminating example of the romantic personality. Boccaccio,[11] admirer of Dante and friend of Petrarch, widened human experience through the medium of satirical lore concerning earnest as well as superficially motivated lives. In his case artistry of form—far more impressive than the occasional startling grossnesses of his material—binds together a wealth of rare and extraordinary experiences. He also revealed the desire of a super-refined city population for life in the unspoiled open country under the cloak of pastoral poetry.

[10] Francesco Petrarch (1305-1374) was a cleric and perhaps the most significant of the Italian humanistic littérateurs. He invented the sonnet form (thus becoming a model for the English poets of the Elizabethan Age) and wrote a great deal in other media.

[11] Giovanni Boccaccio (1313-1375) was something of a diplomat, an official lecturer on the works of Dante, and above all a master of Italian prose. The *Decameron*, though often gross and obscene, keeps its place as a classic collection of great short-stories. See E. Hutton's *Giovanni Boccaccio: a Biographical Study.*

In other respects Boccaccio's work is not overburdened with philosophic thought. His Fiametta is no close relative of Dante's Beatrice.

Antiquity

The interest in nature that stirred the heralds of the Renaissance was not exhausted in physical theories, psychological niceties or pastoral verse. Men began to look for uncorrupted and immaculate naturalness in Greek antiquity. The humanists, gazing backward, saw the land of the Hellenes, but refused to include in their view the Christian fulfillment of the Greek spirit. Thus there was introduced that arbitrarily "idealistic" concept of an antique paradise of innocence and beauty which has lasted into our own time. Such "Attic rhapsodists" as Shaftesbury [12] and Winckelmann [13] are the successors of Petrarch. Though affectionate familiarity with the Greek ideal has been and still is valuable as an aid to the education and mental growth of younger European peoples, and though exact philological study of the culture of antiquity has always been richly compensatory, a reactionary return on the part of Renaissance humanism to polished Ciceronian periods could not ennoble the Scholastic Latin language because this—which was a living tongue—died of artificial constraint. The humanistic epics of Petrarch are frostbitten; his Italian lyrics live.

While the vernacular was creating such marvellous things as the indescribably delicate letters of St. Catherine of

[12] Shaftesbury, see page 356.

[13] Johann Joachim Winckelmann (1717-1768) was a German archaeologist and a passionate lover of classical art. It was he who enkindled the German enthusiasm for Italy, thus deeply influencing Goethe. See W. Pater, *The Renaissance.*

Siena,[14] humanistic poets began to divert the muddy stream of their fun into dull neo-classic Latin. The charming tales of Silvio Piccolomini [15] could not halt that degradation of humanism which began with Poggio [16] and reached the abyss with Filelfo.[17] Reason which proudly relied upon its own powers, a consciousness of standards dictated solely by the desires of the ego, sold its ribald or sardonic literary skill to those who had money and would pay handsomely. Quarrelsome pedants made themselves and their quiddities ridiculous. The more eager sovereign reason was to pose as the force which arranged all things, the more raucous became the clamor of disapproving criticism. Such thinkers as devoted themselves passionately to this criticism concealed from themselves and their environment an inner lack of creative power. Many sought a bright new science of nature, without making any preliminary endeavor to invent the instruments of investigation. Accordingly they went from one fantasy to another, united only by their opposition to that inherited philosophical wisdom no one can profitably dispense with.

The Attack upon Aristotle

Soon a critical uprising against the Aristotelianism of the Schools had set in. Taurellus [18] undertook to construct a logic independent of the Stagirite. Like all humanistic

[14] St. Catherine of Siena (1347-1380) was a Dominican nun, one of the holiest and most illustrious women of the time. Her work is published, but there is no first-rate biography in English.

[15] Enea Silvio Piccolomini (1405-1464) became Pope Pius II in 1458. His letters are perhaps the most charming of his writings.

[16] Poggio Bracciolini (1380-1459) was a diligent and able copyist of ancient manuscripts but a decidedly immoral writer.

[17] Francesco Filelfo (1308-1481) was a soldier and a humanistic humorist, whose fun is probably as gross as any on record. See Symonds, *The Renaissance in Italy.*

[18] Nicolaus Taurellus (1547-1606) was a German scholiast.

philosophers, he was eager to oppose the Aristotle of the original Greek texts to the Aristotle who had been introduced to the Middle Ages with Neo-Platonic additions. Thus there was lost the understanding for that magnificent and thoughtful *development* of critical realism which had been made possible precisely by the late Hellenic and early Christian transmutations of the original texts. Unfruitful reactionary return to a more primitive state of thinking is never beneficial to a complex era greatly in need of scientific investigation. And humanism, supposedly superior to the still virile Scholastic system, was reactionary. Nor was Aristotle, reconstituted and in a certain sense purified, evaluated unbiasedly. Averroistic meanings were read into his work, in order that the Scholastic conclusions might be contested more effectively. The humanists then went on to resurrect other ancient philosophies for the sake of making war upon Aristotle. In all this diligence there was very little real philosophical energy. Laurentius Valla [19] could think of no more important sage to set in opposition to critical realism than Epicurus—amiable man-about-town and weakest of Greek systematizers. Peter Ramus,[20] for his part, was so charmed by the rhetorical effectiveness and rhythmic skill of Cicero that in sober earnest he placed this eclectic and feeble dilettante on a level with Aristotle.

Then the great attack which had been made upon the system of Aristotle in the name of Platonism moved from

[19] Laurentius Valla (1407-1457) was a philologist and humanist whose *De Elegantia Latinae Linguae* was one of the most popular books of the era. He also applied textual criticism to the Vulgate Bible. See J. E. Sandys, *A History of Classical Scholarship* (Vol. II).

[20] Peter Ramus (Pierre de la Ramée) was murdered during the massacre of St. Bartholomew's day, 1572. He was one of the foremost opponents of Aristotelian logic, and wrote such treatises as *Aristotelicae Animadversiones* and *Institutiones Dialecticae*.

Greece into Italy. The Council of Florence [21] first introduced Plato in the original to the western world. Soon Cardinal Bessarion [22] was denouncing all opponents of the Academy. Gemisthos Pletho [23] induced Cosimo deMedici [24] to establish a Platonic academy in Florence. This courtly Maccenas in turn befriended Marsilio Ficino,[25] a humanist who, though he was involved in strange magical cults, sponsored a Platonic theology in which there was a marked absence of later Christian influences. Lorenzo the Magnificent,[26] for his part, established a hegemony of the arts upon the prosperity of his Florentine international bank. An unprincipled politician, an irrepressible manufacturer of carnival ditties, a soul basically diseased and over-refined,

[21] The Council of Florence (1439) decreed the reunion of the Latin and Greek Churches, but the existing schism was not basically affected. Thirteen years later there occurred a great exodus of Greek scholars from Constantinople, a migration which profoundly influenced the state of learning.

[22] Basilius Bessarion (1395-1472) was a Greek scholar and monk who joined the Roman Catholic Church. In 1439 he was made a cardinal by Pope Eugenius IV. Some years later, Pope Pius II appointed him titular Patriarch of Constantinople. He was famous for his translations of Greek authors into Latin and for his advocacy of Platonism. See L. Pastor's *History of the Popes* (vol. 5). Unfortunately there is as yet no good treatment of Bessarion in English. His works, like those of most other important scholars of this period, are reprinted in Migne's *Patrologia Graeca.*

[23] Gemisthos Pletho (who died about 1450) was a Byzantine philosopher who migrated westward and became engaged in bitter controversies with Aristotelian schoolmen. He had attended the Council of Florence as ambassador of the Emperor John VIII.

[24] Cosimo deMedici (1389-1464), a princely benefactor of scholars, founded the Florentine Academy for the study of Plato and gathered a great library of manuscripts.

[25] Marsilio Ficino (1433-1499), was an Italian philosopher who for a time presided over the Florentine Academy. His *Theologica Platonica* developed the trend mentioned in the text. See Symonds, *op. cit.*

[26] Lorenzo the Magnificent (1449-1492), grandson of Cosimo deMedici, was the lavish friend of learned men and the determined enemy of constitutional government. He himself was a poet of some ability. See E. L. S. Horsburgh's *Lorenzo the Magnificent.*

Lorenzo nevertheless summoned Savonarola [27] to Florence and protected his friend, the marvellous youth Pico della Mirandola.[28] Thus philosophical and personal enterprises were intertwined in manifold ways.

The Faustian Passion

As might have been expected, the new devotees of nature burned their candles at Plato's shrine. The gods and daemons of antiquity were likewise summoned to aid in the conquest of natural forces. A kind of Faustian passion was enkindled, though experiment and mathematical formula were as yet unknown. Magic was the watchword, and with it the symbolism of numbers went hand in hand. The nature student of the Renaissance time was, therefore, not a physicist but a wonder-worker. He could dispense with everything except the mysterious books of Nostradamus.[29] Thus the skeptical time, hostile to rigid Scholastic method, sank into bottomless superstition. A man of the twentieth century (though this is, in all truth, credulous enough) finds it difficult to understand the gossip which men like Paracelsus,[30] Agrippa of Nettesheim and even the illus-

[27] Girolamo Savonarola (1452-1498) was a Dominican monk whose ability as a preacher and reforming zeal were notable forces in the Florentine Renaissance. He was put to death for heresy and sedition; and though he seems to have grown somewhat fanatic, the accusations upon which the sentence of death was based were undoubtedly false. The standard reference is L. Villari's *Life and Times of Girolamo Savonarola.*

[28] Pico della Mirandola (1463-1494) was a young and very ardent Platonist who was destined to have considerable influence upon the English poet, Edmund Spenser. Though he wrote "on everything that can be known," Pico della Mirandola was primarily a philosophic poet without any deep grasp of metaphysical problems.

[29] Nostradamus (1503-1566) was a French astrologer of Jewish ancestry, whose real name was Michel de Notre Dame. He wrote treatises, but lives on as a legend.

[30] Paracelsus (1493-1541) was a German physician and chemist whose real name was Phillipus von Hohenheim. Having gathered a vast amount of lore and gossip from practitioners of folk medicine, he wrote accounts of

trious physician Cardano [31] accepted as a kind of occult revelation.[32]

Naturally the Platonism which flourished round about these men was not the genuine idealism of the Academy, but an adulteration in the Neo-Platonic mode. Ficino [33] was concerned with "soul" rather than with the "ideas" or the shadow of matter set forth by Plato. He considered the "soul" that which knows the "ideas" and that which is imprisoned in matter. Indeed, "soul" is, in his opinion, the third essence, "idea" and "matter" being first and second essences. Third essences—demons—are everywhere confined in the physical world, which they form. To stones and plants they give peculiar powers of healing or poisoning. One who knows third essences, who is able to call them by name and summon their help, can master the world. There were many aspirants to this mastery. The fact that the vagabondish lives of Renaissance dabblers in the occult contrasted strongly with their supposed powers did not destroy their reputations. Lorenzo himself joined in the festivals of the magicians and listened to their Platonic dialogues.

Irony and Ariosto

In another, more superficial society, which sprang up round the court in Ferrara, people began to smile a little at this professed magical mastery of nature. A sophisticated, frivolous "spirit of enlightenment" made fun of the all

"experiments and cures" which thrilled a whole epoch. Frantz Hartmann has written an account of his life and doctrines. Of course there is Browning's poem.

[31] Girolamo Cardano (1501-1576) was in many respects a remarkable man. Mathematician, philosopher and physician, he left significant work in such books as *Ars Magna*.

[32] Agrippa of Nettesheim (1486-1535) was a physician and philosopher who combined learning with credulous balderdash. Henry Morley has written an interesting account of him.

[33] Marsilio Ficino. See page 252.

too gullible thaumaturgists and thereby conferred a benefit upon the epoch. Ludovico Ariosto [34] did not satirize his art, and he valued his heroes sufficiently to give them an attractiveness which still fascinates mankind. But he did satirize his public, the court fond of pastoral fancy, by exaggerating the marvels in which his heroes shared. In his work the aroma of magic was dissipated, and the great, "harassed" personality emerged into a less misty day. There Roland flings the cliffs into the sky—so far that they do not return to the earth. The fact that Ariosto makes us smile is proof that Ariosto's art, which he took seriously enough, is great. He traced with remarkable perspicacity every trait of human passion. But one has only to compare what was important to Dante and what was important to Ariosto to realize that rimed romantic irony was a rising tide that would corrode that genuine confidence in values which had hitherto characterized the European man. Now truth and goodness were to become matters of taste. Virtuosity would soften the firmness of virtue. As a result art would be gradually emptied of any earnest reflective content. Creative endeavor had commenced to be a game. Ippolito d'Este [35] seems to have discerned this when he asked his protégé Ariosto: "Whither is all this foolery to bring us?"

The Arts

The ripening harvest of new experience of human nature was not, of course, destroyed. The Renaissance diligently explored the complex soul of the queer human creature. In the plastic arts also, mastery of form was attained by many-sided intelligence. The experimental painting of Cas-

[34] Ludovico Ariosto (1474-1533) was an illustrious Italian poet, author of *Orlando Furioso,* and model for various other writers, particularly Edmund Spenser.

[35] Cardinal Ippolito d'Este was the patron and employer of Ariosto.

tagno [36] and the attractive formalism of Botticelli [37] are deft and knowing. Masaccio's [38] realistic frescoes, Donatello's [39] marbles, are testimonials of a struggle for the secrets kept by nature. The significance of all these matters was discussed by the æsthetic philosophy of Leone Battista Alberti.[40] This called for an increase of the element of form in the colorful art-vision, and counseled the artist to be obedient to form. The lover of the beautiful could then (it was believed) discover the counterparts of the figures fashioned according to the law of form in nature.

What Alberti demanded, Leonardo da Vinci [41] achieved with astounding perfection. This inventive and inquisitive student of the flight of bullets and birds, this searching anatomist of the human body, this forerunner of the intri-

[36] Andrea del Castagno (1410-1457) was a Florentine painter, creator of the frescoes of Sant' Apollonia. See Berenson's *Florentine Painters.*

[37] Sandro Botticelli (1444-1510) was, perhaps, the most representative painter of the early Florentine Renaissance. There are analyses of his work by E. Steinmann, A. Streeter, and H. Ulmann.

[38] Masaccio (1401-1428) was the artist who decorated the famous Brancacci Chapel in the Church of the Carmine at Florence. This was a favorite place of study for later Italian painters. See S. Reinach's *Apollo.*

[39] Donatello (1386-1466) was a remarkably gifted Florentine sculptor who revolutionized his art. Something of his influence is caught up for American readers in N. Hawthorne's *The Marble Faun.* See Hope Rea's *Donatello.*

[40] Leone Battista Alberti (1404-1472) was a prominent writer on the theory of painting and architecture.

[41] Leonardo da Vinci (1452-1519) was a genius of extraordinary universality. Born at Vinci, near Pisa, he spent his youth in Florence, the best years of his manhood in Milan, and his declining days in France. His interest in mechanics and science was great; indeed, as a young man he seems to have considered himself an engineer rather than a sculptor or painter. Today, though his writings are discussed warmly and read with some interest, no one thinks of them in the same breath with his magnificently mature art creations. The Mona Lisa is in the Louvre; the Last Supper in the Refectory of Santa Maria della Grazie, Milan. His caricatures may be examined in the larger monographs dedicated to his work. There are interpretations by E. Müntz and A. Rosenberg.

cate modern psychology of vision, this discoverer of atmospheric colors in all manners of perspective, was also the first to make a synthesis of form. He never toyed with mere comeliness of figure; he never copied nature but constantly fashioned it to the measure of his idea. Instead of things that forever remain things, he painted human nature which, revealed in his work, becomes ours directly and individually. But his sardonic caricatures also disclose the essence of that nature when it is lustful and unrestrained, and show what a horrible thing pride of reason may produce. Nowhere else in art can one see more clearly the frightful character of the human entity which has surrendered to nature. Who does not perceive that Mona Lisa, so lifelike in every detail, is a dæmonic creature with a smile about her lips and brows which is derived from a world visualized through eyes like those of Strindberg? [42] We know from certain sketches and confessions of Leonardo's that the secrets of magical cults were known to him. That is perhaps why his work is not spontaneous and never light-hearted. He did few things, but everything he accomplished is important and intrinsically valuable. Nor was he, who portrayed so frankly the world from which sanctity had fled, unable to visualize sanctity. In his hands the noble realities of space and color congealed into light which transpierced poetically the fogs of a fearful earth. This master of the grimaces of the damned was also the singer of grace. If there be a worthy likeness of Christ in art, then (if one excepts Fra Angelico [43]) it is the work of Leonardo.

That which the expressive paintings of Leonardo, who had been made wise by experience, declared with gentle but

[42] Johann August Strindberg (1849-1912), a pessimistic Swedish novelist and dramatist.

[43] Fra Angelico (1387-1455), whose secular name was Guido da Vecchio, was the greatest of the Franciscan painters and perhaps the most purely spiritual of all artists.

profound reflectiveness, was enunciated with passionate gesture by the great and pious anger of Michaelangelo Buonarroti.[44] His estimate of our life on earth is worded menacingly in the uplifted arm of the Final Judge, who bans the wicked into darkness. If one were to doubt the metaphysical earnestness of Michaelangelo's art creations, a glance into his powerful and sombre lyrics would dispel the doubt. For they declare that neither sculpture nor painting but only the love of God can quiet the soul.

Raffaelo's [45] child-like genius perfected a transcendent picture of nature redeemed by the light of grace. Nowhere else is philosophical innocence reflected so steadfastly and earnestly as in his faces of children at play. His amiable creatures know also of ununderstandable pain and unearthly peace. Raffaelo seems a copier of nature only to sophisticated minds: formal design is nowhere so obvious as in his compositions. Only an all too complacent classicism could, moreover, have called him the originator of a lineal grammar of canvas tinting. Schopenhauer was more just in his estimate of Raffaelo than was Goethe—possibly because the Sistine Madonna meant more to Schopenhauer. Raffaelo's masterpieces, like Andrea del Sarto's [46] *Charity*, Giorgone's [47] *Concert* and Correggio's [48] *John*, are monu-

[44] Michaelangelo Buonarroti (1475-1564), sculptor, painter, architect and writer of impassioned reflective sonnets, was the most majestic of all Renaissance artists. There are good books about him by H. Thode, R. Rolland and others.

[45] Raffaelo Santi (1483-1520) is, perhaps, the best beloved and most severely criticized of the Renaissance painters. Who does not know and love his Dresden Madonna and Disputa? See E. Müntz's *Raphael* and J. Klaczko's *Rome and the Renaissance.*

[46] Andrea del Sarto (1486-1531), master of atmosphere, was a Florentine mural painter. His "Charity" hangs in the Louvre.

[47] Giorgone (1478-1510) was one of the greatest among the Venetian painters of the Renaissance. His "Concert" hangs in the Louvre. See B. Berenson, *Venetian Painters of the Renaissance.*

[48] Antonio Correggio (1494-1534) has been termed a "sentimental Michael-

ments of an art rich with thought and informed by the classical concept of the nature and worth of man. Changes of taste, characteristic of the present time, ought not to lead us towards a misunderstanding of these magnificent creations. Men have often been temporarily blind to the beauty of great art.

The Renaissance strove with every means and in all possible ways to carry further its study of human nature. In stark contrast to Raffaelo's presentation of transfigured human nature, Machiavelli's [49] theory of politics developed a picture of reason in rebellion, of reason as a usurper, which had already been drawn in Leonardo's caricatures and Michaelangelo's visions of herded slaves to instinct. The frankness of Machiavelli's *Il Principe* ("The Prince") borders on shamelessness; and yet his brilliant honesty does talk to us frankly about the real deeds of rulers. His teaching is vitiated in the final analysis by the fact that a mature ripening of enterprises cannot be attained through his unscrupulous methods, and that scarcely a single one of the princedoms he describes came down as a heritage from father to son. How right Bacon was when he said, "We owe him a debt of thanks for having told us bluntly how men generally act and not how they ought to act," is proved by our own immediate present. Today also the powerful are feared rather than loved; and governments, prodigal of the goods of others, are miserly with their own.

angelo." His influence upon the development of art was certainly extraordinary. See C. Ricci's *Correggio.*

[49] Niccolo Machiavelli (1469-1527) was not only the author of *Il Principe* ("The Prince") in which the justification of might for might's sake seems to be accomplished, but also an historian, statesman, diplomat and man of letters. He has, no doubt, been widely misunderstood. Editions of his famous masterpiece are easily procured. See *The Commonweal,* September 14 and 21, 1927, for two articles on Machiavelli by Harvey Wickham.

3. The Rhapsodies of Naturalistic Pantheism

Gradually the star of Renaissance poetry began to pale. The triumphing philology of the later humanists placed Petrarch beside Cicero in order to idolize both. Comedy was adulterated into improvised mimicry. Naturalism degenerated into the cheap journalism of Aretino.[50] A chill classicism froze even the Christian romances of Tasso [51] in whose songs of love and daring, art which still nurtured a metaphysical content sang its last song. Poetry gave way to a philosophy which was highly fantastic, at least in so far as Italy was concerned. Whenever philosophic inquiry begins by assuming that it is necessary to start all over again, it proceeds to compose rhapsodies in the strain of naturalistic pantheism. This had been true along the Ganges, by the Ionian sea, and in the cell of Erigena, the great Celt; it was to be true once again in Italy. The methodology of natural science not having been determined, the enthusiastic Renaissance rhapsodists had no choice excepting the one between Scholastic logical rigor and wild reverie. They thirsted after discoveries in the domain of nature study; but incapable as they were of the creative modesty and reflective temperance of genuine physics, they erected on every little patch of newly discovered scientific territory vast towers of speculation having no solidity. The proverb which all admirers of such men appeal to, and have appealed to, is the hypothesis of Copernicus.[52] This was

[50] Carlo Aretino (fifteenth century) was a humanist and the chancellor of the Florentine Republic.

[51] Torquato Tasso (1544-1595), the author of *Jerusalem Delivered,* the epic masterpiece of Post-Reformation Christendom, is the subject of a two-volume biography by Robert Milman.

[52] Nicolaus Copernicus (1473-1543) was a celebrated Polish astronomer who revolutionized our conception of stellar space. His great treatise is *De Revolutione Orbium Caelestium.* Consult Bryant's *History of Astronomy.*

a stroke of genius, which strangely enough blossomed out of a knotty tangle of magical symbolism and astrological nonsense, and then lasted several centuries as a way of describing the courses of the stars more amply and simply than could be done with the aid of the Ptolemaic hypothesis. Today it has in turn become apparent that the Copernican theory needs a thorough reconstruction, very likely in the sense of cosmic finiteness.

The Copernican Idea

For a while the "world picture" devised by Copernicus became the shibboleth of a culture rebellious against the constraint of all tradition. To the late Renaissance, this "world picture" seemed to imply nothing less than the overthrow of the antique idea of the universe. The decline of the classical world, which had begun in a political sense with the barbaric invasions, was thought to have been completed philosophically by Copernicus. Attacks upon Scholasticism seemed to be successful from this point of vantage. The compass, the voyage of Columbus, the circumnavigation of the globe, the telescope, gunpowder and printing were accepted as "refutations" of Aristotle. The cosmos was suddenly widened beyond the limits set by the imagination, and it seemed possible there might be no limit. The static central point of the world was lost, the earth seemed suddenly only an inconsequential speck of dust. Now that the crystal bowl of the ether, in which the stars burned like candles, was broken, the sky seemed small, the Deity was incomprehensibly far away, the moon was a stellar body of no great importance, the sun was dead and yet all-powerful. The history of man had apparently lost its meaning. But all this excitement, quite natural then, appears artificial to us now. Are God and the soul confined within three paltry dimensions? Does the telescope measure

the kingdom of eternity? Surely the greatness of a soul does not depend upon the length of the body, nor is the significance of a star determined by its diameter. Our happiness and our misery have nothing to do with the climate of Mars. If there were a physical central point of all things, would it be necessary that those who alone can understand these things should live precisely there?

A certain fact must be borne in mind, therefore, if one wishes to do justice to these struggles between philosophy and natural discovery. Normally it is not the great inventors and discoverers but their disciples and propagandists who exaggerate the range of new views. These demagogues are not chary of sarcasm and defamation. As a result passionate strife is enkindled during periods of comparative barbarity; and because mankind learns only from painful experience, great and elemental differences of opinion are seldom settled by the clash of words alone. The tragedies of humanity are not staged on lecture platforms.

Cardano

As for the frenzied poets of the Renaissance star cults, they were adventurers distraught with their enthusiasms and not unfrequently out of their true minds. They were the successors of notable magical philosophers like Marsilio Ficino and Pico della Mirandola. They preferred the symbolism of numbers to mathematics. One of the most unusual figures of this period of transition was Cardano, the successful diagnostician and master of suggestion, the fosterer of intrigue and the self-supposed victim of persecution, who on the one hand discovered a famous formula for the solution of tertian equations and on the other hand boasted, in his memorable autobiography, of association with demons. On the whole, however, the pantheists who came under the

spell of Copernicus were not magicians but disciples of the Platonic Eros.

Telesio

The most temperate of those who loved physics without knowing a great deal about it was Bernardino Telesio.[53] Drawing up the program of an undertaking without being quite sure of its goal, he founded the Cosenzian society for the investigation of nature, a predecessor of more fruitful scientific institutes. His antagonism to Aristotle was quite as violent as the results of his own private research were insignificant. Telesio's criticism attempted to negate the dependability of conclusions. He held that these should be viewed as mere guesses for which there was some justification. No one understands the objects about which he reasons well enough (said Telesio) to know if the classifications and comparisons he establishes are pertinent. Similarly, induction must necessarily stand upon a basis of experience too narrow to be trustworthy.

This view misunderstood the formal necessity of conclusions quite as fully as it did the evidential force of mathematical induction. Nevertheless his loose skepticism brought Telesio to the idea of Verification, which was to serve the future well in formulating a new method. Verification means that all conclusions need the corroboration of experience. Its value becomes apparent when it is stated in the following general formula: the most convincing of proofs is the one arrived at by two methods each of which is wholly independent of the other. Telesio's discovery of it was probably quite accidental. It led him personally to

[53] Bernardino Telesio (1509-1588) was a Calabrian philosopher who founded the Academy (anti-Aristotelian, of course, as the name implies) of Cosenza. His *De Rerum Natura* is the treatise upon which his reputation as a thinker rests.

make the immature demand that knowledge gained by the senses could be trusted, but that reason should be ignored. Had Copernicus professed nothing more than such Epicurean naïveté, he would certainly not have arrived at his hypothesis. And so it was quite natural that Telesio's cosmogony sank back into those guesses which at an earlier date had characterized Eleatic habits of thought. He revived Empedocles' notion of mingled elements.[54] The soul he called first a fine, mobile matter, and next a *forma superaddita*—a form imposed in addition. Obviously these teachings have nothing in common with modern physics.

Giordano Bruno

The greatest of Telesio's disciples was Giordano Bruno,[55] the passionate eulogizer of Copernicus. He considered it evident that all the newly acquired knowledge had its origin in the discovery of a new method of investigation. But we see clearly how remote he was from experimental technique when we note that during his whole life he labored to perfect the notorious Lullian logic machine, which at best could do no more than bring about a kind of Esperanto of ideas. His philosophical poetry certainly does not repose upon investigations in the domain of physics. He was fascinated rather by what may be termed the "undreamed-of possibilities" of knowledge. Perhaps there are different minds

[54] See page 27.

[55] Giordano Bruno (1548-1600), unfortunate and restless spirit, was born at Nola, in Campania. While still a mere youth he entered the Dominican Order, but soon found the Aristotelianism taught by his religious professors far less attractive and stimulating than the doctrine of Telesio. Accordingly he left the Order and later the Church, wandered about in various parts of Europe (including England), and probably joined one of the Reformist movements. He wandered back into Italy during 1592, was seized by the Inquisition at Venice, and later burned at the stake in Rome. His works include *Della causa, principio ed uno* and *Del infinito universo e dei mundi.*

on other stars, who look at the world with senses peculiar to themselves, see colors to which we are blind, and clothe the universe of passing things in an array of qualities they perceive but to the knowledge of which we cannot attain. Perhaps! And therefore (was the conclusion) sense perception does not disclose to us the beautiful, simple courses of the stars and the atoms; but explanation through the use of reason transcends the mists of limited sense apparition. Here Bruno approached the idea of Copernicus from a side quite opposed to that adopted by Telesio. His poetic fancy, while glorifying reason, attempted to soar beyond even that.

Space expands into endless distances (he said). Our stellar system is only one among many larger systems; and our sun shifts its position. Everywhere manifold loveliness bursts from the soil of a few simple stuffs. Where you are, there is the center of the universe. Around you on all sides a comprehensible world is ordered beautifully in harmonious systems. From whatever central world-point you may regard it, it is always all and one, always a great work of art. But what is true of the greatest things is true also of the smallest. The whole world is everywhere; and the whole gleams from every part. The microcosm is the counterpart of the macrocosm. Even the atom is a world, in reality a monad, a point of unity and a personally living thing. Yes, the whole world is alive, and every monad is a mirror of the whole world. Each individual soul regards the macrocosm as a unique and constantly changing individuality, as a work of art appropriated by it and adapted to it. That which the soul contains within itself is always a new and radiant art creation, now rich and colorful, now bleak and dreamlike. The soul itself, moreover, is a microcosm. The monads of the body join together to constitute the marvellous creation of the human personality; and the monads

of the world are the limbs and the elements of life of the World-God. This has a body composed of stellar atoms, and a soul that is the Artist of all things. Before His all-seeing, goodly vision, the spinning of necessary and implacable fates—incomprehensible to us—is a problem understood. He beholds only the final beauty of the cosmic tapestry. By looking at art we also, we children of misery, learn to guess at the greatness and loveliness of bitter doom. The enthusiasm of the creative genius unveils, at least partially, the mystery of the universe. As he gazes upon cosmic order, the antinomian contradictions are solved. God is the greatest and the least, the prime monad and the world.

All these errors were accumulated by a spirit we must term great and unbalanced. Though a poet be both a cool thinker and a genius, his enthusiasm can never unveil the world's riddle. Whatever treasures of thought are spread out in Bruno's work come either from Copernicus or from the interpretation of the universe sponsored by Nicholas of Cusa.[56] It was this great cardinal who had spoken of the final dispersion of contradictions; and in his work there stirred a vast idea of the omnipresence of God which Bruno visualized imaginatively and distorted. Obviously a world without boundaries, in the sense conceived of by Bruno, would also be immeasurable and ultimately chaotic. His whole system is poetic. For the living, spiritual substances he fancied he discerned are the fantasies of a poet, and are neither necessary to nor demonstrated by the interpretation of the world offered by physics. No one can prove that there is any such thing as an unlimited division into infinitesimal parts; and science cannot profess indifference to all absolute definitions of dimension, if only for the reason that a mechanism will often, when its dimensions are steadily en-

[56] See page 214.

larged, change or stop its activity suddenly. Bruno's stellar body, moreover, is a phantasm of legendary magnificence but without philosophical importance; but if one takes it seriously enough it may be considered a mythical image of Divine omnipresence. On the whole his doctrine is often impressively symbolic, it often indicates wide fields of inquiry, but it makes no contribution to the methods of natural science.

Tommaso Campanella

All the nebulousness of the period of transition in which Bruno lived seems to have been concentrated into the uneasy mind of Tommaso Campanella.[57] He advocated that mathematics be placed beside logic at the point of entry to the sciences, but like his teacher Telesio he defined thought as something that stores up past perceptions. Tradition (he held) allows us to see with the senses of departed generations. Knowledge and deduction are a kind of system of accounting applied to perceptions. It is true that Campanella did not ignore those moments of attention, of desire to gain experience, through which sensations become perceptions. Indeed, he was so much of an enthusiast in his pragmatic certainty about the value of reflective observation that he considered it illogical to take seriously the extreme reasons for doubt advanced by the skeptics. There are (he said) four basic certainties which we may take for granted: we are; we act, know and will; we are limited by unexpected external happenings; and our knowledge is wider in scope than our experience. These declarations are formulated in an unusually illuminating and thought-pro-

[57] Tommaso Campanella (1568-1639) was a Calabrian who became a Dominican. Accused of plotting against the rule of Spain, he was cast into a dungeon and kept there for twenty-seven years. Finally he escaped to Paris, where he died, renowned chiefly for his *Civitas Solis* though *Philosophia Universalis* is probably his chief work.

voking fashion, and they almost surpass the celebrated meditations of Descartes upon thought and the soul.

But side by side with these lucid notions, Campanella placed a weird mixture of three magical sciences, the common ground between which was termed (in an Averroes-like manner) the World-Soul. His doctrine of four worlds obviously owes a great deal to early Scholastic influence (Erigena). The model world of Divine Wisdom is, said Campanella, not to be reached by our investigations, though the world of angels can be entered with the aid of magic arts. Observation must, therefore, concern itself with infinite space and the numberless stars. In the domain of astronomy Campanella accepted the impossible compromise theory of Tycho de Brahe.[58] It is characteristic that a man so little at home in any realm of natural science should have succeeded in creating a really interesting Utopia. His *Civitas Solis*—"the sun state"—blended in a peculiar fashion Spanish world-rule and socialistic dreaming. Strangely enough, Campanella's division of the universe and his Utopianism remind us strongly of Francis Bacon of Verulam, another precursor of natural science.

Francis Bacon

A Machiavellian pursuit of fortune brought the unscrupulous adventurer Francis Bacon[59] out of a paltry

[58] Tycho de Brahe (1546-1601) was a celebrated Danish astronomer, famed among his contemporaries for an artificial nose of gold fashioned to take the place of the one lost in a duel, and so admirably adjusted that few could discern its mechanical character. He was an admirable observer of facts (thus proving of much assistance to Kepler) but his theory that the planets moved round the sun, which in turn moved round an earth fixed in space, was untenable.

[59] Francis Bacon, Baron Verulam, Viscount St. Albans (1561-1626), is one of the most instructive and baffling of late Renaissance personalities. Of noble blood, he rebeled against the traditional program of study offered at Cambridge University, went off on a voyage to the Continent, and then

meanness of estate to a position of grandiose power and then later to moral misery. His belief that a ruler who obeyed the law of nature would gain power and reward was the product of shrewd thinking. The road towards greatness which would be taken by modern England was clear to his vision. Apart from that, he was neither an inventor nor a creator of methods, but he did praise both. On his New Atlantis men were to be made happy by steam machines and telephones—yes, even by perpetual motion. But he could not become a genuine innovator, primarily because—like Telesio—he ignored mathematics. Like Campanella he turned the study of supernatural reality over to the poets—with how much irreligious irony we cannot tell. Science (and by science he meant the study of nature) is based upon experience. Its chief objects of concern are nature and man. These provinces of the "*globus intellectualis*" are cultivated by physics and anthropology.

returned to London to engage in a brilliant career as a lawyer. The object was primarily to succeed at court, but it was not until the reign of James I that he could begin his rise to honor and power. In 1621, however, Bacon was accused of grave misconduct and forced to give up his emoluments. This decision of the court was later revoked, but Bacon never regained his political eminence. His literary and philosophical work, however, was perhaps the real ambition of his stormy life. A great philosophical work, *Instauratio Magna* ("The Great Reform") was, he hoped, destined to revolutionize the whole of philosophic habits. As far as this has been completed, it consists of two parts: *De Dignitate et Augmentis Scientiarum* (which deals with scientific study and its branches), and *Novum Organum* (which outlines Bacon's method of induction). To this he added a fragmentary *Historia Naturalis* (to some extent a descriptive study of natural phenomena). His political views are expressed in the *Essays, The New Atlantis,* and to some extent in *The Advancement of Learning.*

Bacon's extraordinary influence upon the world's thinking is not due (as used to be widely supposed) to its originality or revolutionary character, but rather to the fact that he introduced ideas then so hotly discussed in Italy and elsewhere to England at a time when that country was on the threshold of a great era of influence. A helpful impression of what Bacon actually meant to England may be obtained from J. H. Newman's *Idea of a University.* The standard treatment is by John Nichol—*Francis Bacon.*

Here our concern, as students of philosophy, is chiefly with Bacon's teaching about man, which became steadily more and more a psychological theory of knowledge. Such doctrine implied, of course, the decline of philosophy. It dwindled to a doctrine of methods in the natural sciences. Bacon himself was, temperamentally, more interested in criticism than in construction. It escaped his attention that even in presenting his objections to Aristotle he was using instruments of thinking devised by the great Greek. His own *Organon* was to be the "new" teaching that would displace the classical doctrine. But novelty and truth are by no means always the same thing. Bacon's remarks concerning preconceptions are, it is true, the counterpart of the Aristotelian critique of deceptive Sophistic conclusions, and are in their way very significant. They voice an important opinion concerning the validity of knowledge.

After Bacon has warned us to consider only those things dependable which we know by habitual contact and can trust by reason of experience, and to accept on authority and on faith matters which we can later investigate further, he cautions us to be on our guard against equivocations of language. One word may often be associated with different meanings, which will lead to endless misunderstanding; and often relationship between *words* is taken to mean that the corresponding *objects* are comparable, or their syntactical connection is mistaken for logical dependency. But at the basis of Bacon's thinking there is this idea: Do we not see the world only as our eyes represent it to us? Are there not universally distributed fogs to which every one of us falls a victim while trying to think with a human brain? Do we know the objects of our thinking, or do we merely know our thoughts? Do we know the "outer world" or merely an "environment proper to ourselves?" Do we learn to avoid reading our personal experience into objects,

as a child outgrows the habit of scolding inconvenient things? These aspects of one and the same skeptical principle, which modern thinkers were to stress more and more explicitly, can be answered only by the ultimate norms of philosophy. Indeed, the harmony that exists between the microcosmic mind of man and the macrocosmic universe can, in the final analysis, be understood only if it is conceived of as having a Divine origin.

The modern world, having flung away this last named conception, would prove unable to escape the traps laid by the critics of knowledge. Bacon was not earnestly eager to allay the anxiety felt by a great many men; indeed, he did not even realize the dimensions of the problem, which was to be stated in all its vastness by Kant. He believed that physical induction afforded a way out of the difficulty, and proceeded to formulate a logical theory of induction. This was an undertaking the importance of which must not be underestimated, especially since we are still without a wholly satisfactory logic of inductive conclusions, despite the brilliant attempts which have been made by men like John Stuart Mill [60] and Moritz Schlick.[61]

Bacon begins induction with the assumption that there are processes governed by laws. Because investigation in connection with these is carried on by means of analogous comparisons, it will often follow a false lead. A single exception destroys the right to assume a universal dependency. One proceeds, therefore, to place in the center of aroused attention an observation of some remarkable and useful process. Then one gathers together all those occurrences during the course of which the same observation can be repeated. Next one gathers *similar* occurrences, during the course of which one has reason to believe the observation

[60] See page 465.
[61] See page 461.

can be repeated, but in which one does not find it. When one is in command of sufficient material gathered as extensively as possible, it is possible to measure the frequency and intensity of the occurrence to be investigated. Thus Bacon outlined with a somewhat unsteady hand the fundamental principles of statistical method, with the development of which the modern science of political economy would busy itself. Many have believed that Bacon misunderstood the methods of natural science, and have asserted that experiments cannot be described in the manner he designated. We may, however, reasonably object that statistical method has proved its ability to serve as the complement of experimental method—that, indeed, it unravels relations the tangled complexity of which baffles experimentation. Weather and heredity may be chosen arbitrarily as two examples of such complexity. Bacon's purpose was to discover the specific active principle of a thing. Thus again he showed himself unable to dispense with Scholastic concepts when he had a discovery really worthy of attention to present. Today we are seeking once more for shapes and structures, without which it is a hopeless task to attempt the measurement of movement and energy.

Bacon's decision to use his method in the investigation of the mechanical-causal relationship only—just one of the many relationships which philosophers had discerned—was his privilege even though it meant a dictatorial restriction of the goals of thinking. Quite obviously such a decision cannot be a reason for denying, as Bacon did and others still do, that there are other relationships in the universe. Something may exist, even though I do not care to look at it. Bacon's philosophy, in so far as it aspired to concern itself with metaphysical problems, offered a materialistic notion of an atomic world, the dusty particles of which

are endowed with feeling. Thus another modern innovator relapsed into the primitive stages of European metaphysics.

Bacon was a herald of technical achievement. He was totally unable to understand even history, identifying it as he did with experience and so making himself the grandfather of the "age of enlightenment." He eliminated the knowledge of God from the field of science, while terming it a virtue to believe in Revelation even though that did not justify belief. One must not expect to find in this maxim the earnestness of Tertullian, whose definition of "*incredibile*" was "that which seems incredible to one who has been wrongly educated." Bacon's philosophy was indifferent to religion, and his habit of going to church was—on his own testimony—dictated merely by a desire to conform with social convention.

4. Inheritors of Tradition

William Shakespeare [62] is the great poetic interpreter of the catastrophe of the modern personality. And although only a pedant will assume that the author of the full-blooded Shakespearean plays is Francis Bacon, the cool courtier, it must be admitted that the vision those plays open up is filled with Baconian images. To the Greek tragedians, it was the unearthly power of Apollo which, supervising as it did all earthly destinies, transfigured the tragic hero, raised his purpose into the light of glory, and forgave his fault when that had been atoned for. That Œdipus would arrive at Colonnos was Sophocles' philosophical creed. In antique tragedy, moreover, the hero came to grief by reason of the unregulated and ungovernable character of his resolve and the direction taken by that resolve. His purpose was to

[62] William Shakespeare (1564-1616) has, as will be remembered, been deprived of the title to authorship of the plays bearing his name by a number of theorizers. Francis Bacon is the substitute usually proposed.

attain a great and worthy goal; and therefore his sin was not a mistaken action but a fault of being. For even the powerful personality, thought the Greeks, is finite and dependent, is always hemmed in and never perfect. Their "tragic man" was brought to ruin by his will, which refused to conform with the limitations of human nature. Yet this will, this idea, this deed was nevertheless victorious over, superior to, the little world of the chorus, which saw only that the hero desired to be greater than his welfare permitted. The fallen hero, having done penance, was transfigured. It was God who accomplished this salvation, in the Greek view: the forgiven deed became a noble ethical goal imposed by Divine and human command.

In Shakespeare's case, the governing powers remain veiled and unnamed. His heroes are not driven by a fault of being to carry out a Divine mandate. Rather, the elemental human passions grow in the hearts of his tragic men to such titanic, limitless dimensions that their effect is to force the hero to go, majestically and awesomely, to his doom. These heroes move us, because we are all, in the depths of our souls, as guilty as they. But though the names of the supernatural powers are rarely mentioned, they remain the sources of light in Shakespeare's darkly tragic world. The love of Cordelia, the chastity of Imogen,—who seems part of a fairy tale,—the peace of Friar Lawrence are not altogether of this world; and the daytime conscience of Macbeth, like the night-walking conscience of his spouse, speaks from something deeper than the caverns of the physical world. Metaphysical justice carries out the inescapable, often mysteriously slow, and therefore more terrible, punishment of sin. One may say that the Shakespearean tragedies are darkest and most arbitrarily brutal when they are least illuminated by his philosophy. *Timon of Athens* has all the terrible hopelessness of Euripides: it is a heathen

tragedy of terrestrial despair. This antique pessimism, which often overwhelms Shakespeare, is the shadowy mate of that cross-examination of earnestness of mind which is characteristic of critics of knowledge. It is the source of his bitter sarcasm, just as his mellow humor is the flower of his philosophical reflection. The motif of his knowledge of men is humorous-sarcastic, and its classical expression is the Fool in *King Lear*. Knowledge of human nature, welling up from the deepest sources of a noble soul, knowledge which is the property of a genius who understands the world because he contains that world within himself—this is posited by Bacon as a theory, but is possessed as a reality by Shakespeare with a certainty which no text-book learning could strengthen.

Spanish Culture

English culture was one sign that the spiritual hegemony of Italy was passing to nations farther west. The enrichment of Spanish poetry with philosophic content was another sign. The romantic adventures of the Amadis cycle faded out of view in the newer air. Like the *Lusiad* of Camoens,[63] the poet of Portugal, the drama of Lope de Vega[64] praised honor, the new-found joy in the world, and the fame of explorers. But it was apparent that a loftier spirituality was needed if Spanish art was to become philosophically important. Cervantes' *Don Quixote*[65] made it clear that the old, chivalric ideal of society was out of date. This great work was born of the realization that

[63] Luiz de Camoens (1524-1580), Portugal's solitary great poet, dealt in the *Lusiad* with chivalric adventure.

[64] Lope de Vega (1562-1635) is supposed to have written two thousand plays, giving Spain a great national theatre. See H. A. Rennert's *Life of Lope de Vega.*

[65] Miguel de Cervantes Saavedra (1547-1616), author of Don Quixote, lived an adventurous life. See Fitzmaurice-Kelly's *Life of Cervantes.*

every man, every people, every time is bound to its own task in the mighty labor of history. Romantic irony had thus arrived at a new point of view. It is the hero of the story who is laughed at, not merely the reader who would gayly permit himself to be derided. When a new summons startles mankind (says Cervantes), the gestures of the preceding epoch are empty of meaning. But the epoch itself is not therefore devoid of significance or value.

The human greatness of Hellas did not disappear when the nation came to an end, but anybody who should venture nowadays to go to market in an Athenian toga would make himself ridiculous. The classic poetry of chivalry is eternally young, but one must nevertheless refrain from tournaments. Thus Cervantes satirized the false conservatism of stiff reactionaries. Don Quixote loses ground before the matter-of-fact Sancho Panza. But Cervantes proves himself a great genius because he sees that this comic relationship does not strip his imaginative hero of all significance. Don Quixote is and remains the more distinguished, the nobler, the more knightly man. Cervantes sympathizes with him and accords him dominion over a garden of fable. We may regret that the second part of the novel was never completely developed. In it the Knight—the man of meaning and of melancholy figure—was to become a shepherd. This would have given the world a great satire of modern "nature" stupidity. Thus there would have been combined an ironical epos of falsified naturalism with the social tragedy of courtly Spain. Even so, however, Don Quixote has the universality of Falstaff.

It would doubtless be erroneous to attribute the unique gifts of Shakespeare to a dramatic genius of the stature of Calderon,[66] but the great Spaniard was no less endowed

[66] Pedro Calderon de la Barca (1600-1681) was, perhaps, a finer poet than Lope de Vega, though not so great a playwright. His *Life's a Dream* (La

with philosophic insight. In the measure that he was awed by life he attained clarity. Likewise one may grant that Goethe's *Faust* is greater than Calderon's *Magus* when measured by poetical standards, but on the plane of metaphysical magnificence the two are equal. A thorough-going comparison between the two men would reveal their many intimate similarities. Recourse to grace as the way of salvation has, of course, been more earnestly thought of in Calderon's play. But that he also is distinctly a modern poet becomes clear if one discerns the similarities between his *Life's a Dream* and Shakespeare's *Tempest.* Calderon, too, doubts the certainty of reality:

> "All the wonder world we see,
> All of life, a dream may be.
> And I see that every man
> Dreams whate'er he is or can
> Until at length the visions flee."

This motif is dominant everywhere in the play. The cause of our human misery is a fault rooted in our natures. We can avoid seeing our plight and the nothingness of this world by summoning the courage to say, "I am a man." Only a firm and purified ethical will can pierce the universal veil and triumph magnificently, by reason of its spiritual reality, over deceptive and confining destiny. "For man still overwhelms the stars."

Jesuit Philosophy

This concept that man's destiny is ethical victory over the world was elaborated into a philosophy of the will by Ignatius of Loyola,[67] saint, founder of the Society of Jesus

vida es sueña) is available in several English translations. No other Spanish author has had so much influence upon the drama in other countries.

[67] St. Ignatius of Loyola (1491-1556), founder of the *Societas Jesu* ("Company of Jesus"), was born at the castle of Loyola, in Guipuscoa,

and author of the *Spiritual Exercises.* Ignatius did not seek renown as a philosopher, but he nevertheless became, in all likelihood, the most brilliant psychologist of the volitional life. Before his time nobody had explained so clearly how reason and imagination help, in the sense of motivation, to form resolution. A person without self-control is governed by the emotions or even the passions of the hour, which drive his energies hither and thither. These are powerful motives but they are not permanent. On the other hand, inner motivating causes which can adapt resolve to the service of principle are not always immediately at the service of a man who honestly desires to act well. They must be developed and strengthened. Convictions are the most cogent of all directional motives, but are not, of course, the same thing as superficially entertained "beliefs" picked up here and there. A "conviction" must have been thought through to its ultimate consequences; it must, above all, be made perceptible and colorful by model example. Elementary and shifting principles do not easily impel one to make the proper resolution. It is very easy to succumb to the flitting, extravagant images that come in dreams. These are despised, however, by one who has a knowledge of the will.

The master keeps his dream under his control, and soon he grows according to his dream and desire. Having once become conscious of a strengthened will, he attains that firm and reliable calm which fosters the control of other volitional forces. Certain of his power over himself, he

Spain, and died in Rome. After some years spent in soldiering, he felt called to the religious life and went, during 1522, to the Monastery of Montserrat, where he kept a diary of his interior experiences, which later developed into the famous *Spiritual Exercises,* a classic unsurpassed for its teaching of religious discipline and will training. He then studied ardently, received a degree in Paris, and founded the "Company of Jesus" in 1538. See biographies by Paul Van Dyke, H. D. Sedgwick, and Francis Thompson.

becomes charitable; and in the same measure as this power is developed, he gains dominion over his environment. This he learns to know better than he did before, and therefore his mastery of it is surer. One who surveys from this point of superior vantage the conduct of the world and the emptiness of earthly ambitions, overcomes vainglory and with it the last obstacle to genuine freedom. Those who keep their wills under perfect control give up trying to foster their own well-being, and regard the deeps and wastes of human weakness with a clear glance of reforming and forgiving understanding. Love is ultimately the greatest power; and only he who makes sacrifices for love's sake will become wholly free.

Molinos

Intelligent and extensive observation of volitional experience then enabled the Jesuit theologian Molinos [68] to smooth certain roughnesses in the Thomistic doctrine of grace. Aquinas had taught that man is unable of himself to attain grace. Everything which is obtained of or achieved through grace must, he reasoned, be ascribed to God and His power alone. The action of grace, according to this view, is not a powerful motivating cause, comparable with a passion or an instinct. It is rather something like a *cause of action*, with which the soul can conform without surrendering its freedom. Nevertheless the influence of grace which points out the proper course of human action is so great that no one who recognizes it can take himself out of its reach.

Molinos did not quarrel with these ideas, and he admitted

[68] Luis de Molinos—or Molina—(1535-1600) was a Spanish Jesuit who taught at the Universities of Evora and Madrid, and dealt searchingly with the problem of reconciling grace and free will. He was the first Jesuit to write a commentary on Aquinas' teaching; and his own great work, the *Concordia,* has had a profound influence upon Catholic feeling.

readily that the power to make a resolution in conformity with grace comes from God. Nevertheless, he reasoned, freedom is given for a purpose and must therefore have a field of action. The free man does not coöperate with God in the sense that he appends his feeble energies to Omnipotence. But he is in free possession of the power to wish grace earnestly and to conceive of himself in a state of grace. And if he does wish grace earnestly, his power of volition will be beneficently and vigorously fortified. Essentially Molinos threw light upon just that aspect of the Augustinian doctrine of grace which separates it from Calvinism and Jansenism.[69] Thus understood, his temperate teaching can serve to complete the Thomistic psychology of the will, just as certain traits of the Scotistic theory of freedom can be harmonized with that psychology.

[69] Jansenism, named after Cornelius Jansenius (1585-1638) the Dutch theologian, was a theological doctrine characterized more or less by a form of Christian Stoicism.

CHAPTER II

FRENCH PHILOSOPHY FROM DESCARTES TO PASCAL

1. The New Physics

For a time France bowed to the supremacy of Italian Renaissance culture, but soon the French mind revealed traces of a development quite its own. Instead of the free and unshackled individual, it posited and exaggerated the sovereignty of one individual—the king. Nevertheless naturalism and humanism, with which the modern mind as such has been so basically concerned, were the really important things in France, too. These the Frenchmen of the classical period accepted as evident and true, as reasonable and courtly. Humanism entered the Collège de France in 1531. The erotic tales of Margaret of Navarre [1] enriched the data of psychology in a more special sense than had Boccaccio's books. The fresh, rough genius of Rabelais [2] dealt boldly and crudely with human life, so that his work keeps a fierce Germanic ring. The worldly-wise skepticism of Montaigne [3] took honest pleasure in individual traits. The temperate,

Note: See K. Fischer's, *History of Modern Philosophy* and B. C. Burt's *History of Modern Philosophy.*

[1] Margaret of Navarre (1492-1549), author of the *Heptameron,* was an admirer of liberal thinking and something of a vagrant mystic.

[2] Rabelais (1495-1553), the author of *Gargantua* and *Pantagruel,* was a burly physician, traveller, humorist, innovator and lover of life.

[3] Michel de Montaigne (1533-1592), greatest of sixteenth-century French moralists and essayists, was a gentleman, a student of the classics, a lover of tolerance, and something of a skeptic. He died as a loyal Catholic.

diplomatic and (from an economic point of view) reformative theory of Bodin's *Republique* [4] covered over the abysses which Machiavelli's unrestrained frankness had explored. Poetry in the romantic vein, with its love for perfumed twilights, freely chosen words, new rhythms and the sevenfold star of Ronsard [5] was suppressed by a reactionary society as indecorous and unhuman. Nevertheless the French gift of self-criticism, applied to a humanism that became steadily more shallow, made possible a frank statement of the nature of genuine humanitarianism. The humanism of St. Francis de Sales [6] thus revealed a Christian human nature. To his point of view classical France was able to return, after every intellectual crisis, in so far as its noblest minds represented it. But more modern crises proved more violent.

The New Physics

The greatest influence upon the classical culture of the French was wielded—for it affected the development of René Descartes—by the birth of natural science. Gradually the new physics, antedated by a number of strange and wonderful forms of Pythagorean magic, dispelled the fogs of phantasmagory. The telescope became a serviceable instrument, Kepler [7] discovered the periods of the planetary

[4] Jean Bodin (1530-1596), author of *Six Livres de la république,* was the greatest writer on political philosophy of his time. He is generally credited with having been the first to deal systematically with the vast theme he chose; but he was not a "republican," but rather a defender of absolute monarchy.

[5] Pierre de Ronsard (1524-1585), the "French Homer who was really a Horace," was a protegé of Mary Stuart and the author of a movement of poetic reform through a return to the classics.

[6] St. Francis de Sales (1567-1622), bishop of Geneva and one of the most lovable of all the saints, was a great humanist and the author of *An Introduction to a Devout Life.*

[7] Johann Kepler (1571-1630), an illustrious astronomer, discovered the three laws of planetary motion. He put the observations of Tycho de Brahe to excellent use.

courses, Galileo [8] conducted experiments to establish the sphericity of the earth. The results of these investigations, which could be tested and repeated whenever desired, fascinated mankind. Method gained a victory as soon as it had limited the field of observation and simplified its objects artificially and inventively. It decreed that its world of investigation was that *portion* of reality which Democritos had considered the *whole*.

The qualities discerned in directly visualized objects, as these are laid before the senses, were likewise eliminated by science from its description of results arrived at through experimentation, for the reason that such qualities were considered subjective. This action is as much in conformity with the special purposes of science as it is a deed of violence toward nature. It is clearly the object of the experimental sciences to present the real facts of observation, their similarity and coördination. This purpose is achieved by the methods of physics in one respect only, but very thoroughly in this one. Physicists consider that from their point of view only those movements and shapes are really knowable which permit of mathematical measurement. To these quantitative dimensions the sensory qualities are then—in a manner that is often arbitrary—coördinated; and only changes and degrees in those qualities are actually described. In this way much can be accomplished, but not everything one might desirably wish to know can be ascertained.

Only those who consider technical success wholly satisfying are blind to the limitations of the scientific method. It is able to calculate changes in movement, which can normally be interpreted as redistributions of energy, with

[8] Galileo Galilei (1564-1642) established the fact of the rotundity of the earth. This and other doctrines involved him in a famous controversy with Catholic theologians, for an account of which see Fahie's *Galileo* and the appropriate article in *The Catholic Encyclopedia*.

as much plausibility as one could desire; and it observes degrees of light, heat, sound and odor, which remain the most perceptible indications of such changes. Whether or not one posits as fundamental the calculation of moved masses or of redistribution of forces is a question of suitableness of means to end, for either formula can be led over into the other. The popularity of these two methods of exposition has shifted, until at present the observer of scientific procedure finds that energetic, active elemental particles are determined as really differentiable only through the form and structure of their electron paths. Side by side with hylic (i.e., corporeal) and energy considerations, there appear again structural or hylomorphic considerations. But no method of nature investigation, taken in the exact sense, can ever strip of significance the fact that shape and movement cannot be exhaustively described *without reference to some one for whom that shape and movement exist.* Therefore there have appeared, ever since the separation between physics and philosophy, a series of reactions on the part of critics of knowledge which are concerned entirely with the "ego" to which the world appears. Both sides are much in need of a metaphysical rapprochement, but since the great achievements of Galileo neither has attempted to bring about such a rapprochement.

We may note that serviceable scientific method selects from the wealth of facts which cannot all be controlled one occurrence that attracts attention. If we inquire as to why this attracts attention, it will be discovered that there is involved an immediate or remote *usefulness* which is coveted. The quests of the new physics always have some purpose. But it does not reflect upon or evaluate the occurrence observed as *much* as possible, but as *little* as possible: in short it confines itself to that part of the isolated occurrence which is necessary for mathematical measurement.

This selection once again serves the *purpose*, which is often the acquisition of useful energy. Out of the number of ideal objects which mathematics can build up unhampered out of a minimum of appropriated elements, it selects those *comparable to the fact that serves its purpose* and easily measurable. It does not watch the fall of earthen jugs and downy feathers, but observes the oscillations of spheres which it itself has prepared. Thus a sublime craft renders practical service to theory. The scientist does not wait for events; he creates them. He constructs artificial objects, such as have never existed on earth, after the pattern of the ideal objects of stereometry; and then he proceeds to observe his experience with those objects. To a question artificially posited he gives an artificial answer. Thus human intelligence seeks to learn, from machines it itself has made, which but for it would never have come into being or have been set in motion, *what it itself has done and formed in them.*

Everything else experienced during the course of this procedure is considered a disturbance. In using the word "disturbance" the scientific intellect means that its finite purposes have been interfered with, that its artificial web has been torn. And yet it becomes so absorbed in the careers of its fictions, which are only seemingly self-sustaining and as a matter of fact are wholly dependent upon the human mind, that it regards events which have their origin in reason and possess a purposive significance as if they had been in existence from all eternity and had begun to function without human intervention. Finally even the cosmos is declared to be a machine without intelligence and the human body is viewed as if it were a kind of beefy motor not regulated by a "self" that establishes purposes. This philosophical blindness is the more astonishing when rhapsodies over a universe conceived of as a machine which has appeared of its own accord and quite accidentally, are termed

"natural science." The purposive search for utility, the healthy common sense, which characterize genuine physics have had to correct again and again the errors of modern materialism, with which physical investigation has nothing in common for the simple reason that the conclusions of materialism have not changed since long before scientific method came into being.

With the artificial objects he himself has created, the modern investigator proceeds to compare other facts which interest him, for the most part, because they promise to be useful. Sharp discernment of *similarities* enables him to detect distant and hidden *relations.* Thus a formula of mathematical measurement suffices to describe adequately and accurately, to explain universally, objects which outwardly are wholly non-comparable. In this manner the method of natural science reaps its richest harvest. But one must bear in mind that "similarity" cannot be defined too strictly. Machines of course run on the dot. But the instance that is observed and the instance that is calculated differ in some respects. An event in nature never occurs precisely when it has been calculated and predicted, but always *about then* or *nearly so.* The more complex the occurrences to be investigated are, the greater will be that difference, which one may term "the measure of reality." Our predictions are nearly correct in so far as the stellar courses are concerned, far less correct with reference to the ebb and flow of the tide, and correct only to a limited extent so far as the weather is concerned.

In order to learn about the human body according to this method, one must be content to arrive at a partial description by means of artificial comparisons which are very useful aids to certain purposes (curative purposes, for instance), but which only relatively explain organic reality. The scientific method fails completely with regard to a sin-

gular, unique and not to be repeated event—such as may occur, for example, in the mature human personality. The thoughtful investigator will realize, therefore, that beyond the pale of Democritos there exists a reality which is even, in a sense, the only reality worth knowing. Great geniuses among natural scientists have understood this well; the rough workmen in the craft have barely realized it; and of course the demagogues of science, for the most part quite incapable of mathematics or invention, have ignored it completely.

Caution

The real sources of the materialist's pride are energy diverted to practical ends and the saving of something that is utilizable. These things he then regards as ethical. But the finer spirits among scientists also seek without wilfulness to divert their calculations of mechanical causality to useful ends. A turbine produces motor power with mechanical necessity. It *should* do this; it exists to do this. But when it is in motion it also generates self-destructive heat. This *should not* be the case, and in an ideal turbine would not be the case. And because his achievement had been disturbed, damaged perhaps, the scientist becomes attentive to a whole network of activities. He tries to hit upon, to introduce, a remedy, *not to distribute his attention over factors which are not immediately purposive.* Obviously it would be senseless to deduce a reprimand to science from the fact that it uses artificial simplifications and schemata for the sake of gaining its point. The physicist knows what he is doing, inside his own realm. Within the limits of an area to be investigated, one need not worry constantly about what is going on in other areas. One must, however, avoid blinding oneself to their existence and saying: that which

I do not bother about does not exist—i.e., the world outside the scope of Democritos does not exist. Genuine physics can never be contradictory, in any manner whatsoever, to genuine metaphysics.

The worst metaphysics, moreover, is the system erected by the doctrinaires of physical science. It lauds ideal hypotheses as if they were evident, exhaustively described reality, terms approximate solutions authoritative, mistakes models for originals, calls energies which are directed to a purpose blindly mechanical energies, confuses organisms and machines, and attributes machines to chance. Inevitably this pseudo-physics, which is also pseudo-metaphysics, is swept aside by advancing science itself. But until this occurs, harm is done to general culture by all who blow trumpet blasts in honor of materialism in the unwarrantedly appropriated name of physics—particularly by those physicists whose well-earned authority in their own study has led people to credit their talk about things which they fail to understand because of an attempt to make one method of exploration serve all purposes. A feather sinks differently than a lead ball does, so long as no absolute vacuum has been created for the sake of an experiment in gravitation. The Aristotelian physics, concerned as it was with bare mysterious reality, cannot, for instance, be said to *conflict* with the physics inaugurated by Galileo, which posits ideal entities such as frictionless surfaces. Both are necessary kinds of reflective observation and are complementary. If one bears this in mind, the active method of Galileo is seen to be immeasurably valuable as a necessary circuitous route to the observing method of Aristotle. Reality, we may conclude, can be described adequately only through philosophical study which adjusts in its synthesis the one-sided interests of both the physical and the critical method.

2. René Descartes

René Descartes,[9] a nobleman and a remarkable mathematician, was the first modern philosopher to have formulated his own system of philosophy in classic terms, after having fully mastered the methods of natural science. One can evaluate this system properly only when one bears in mind the extraordinarily vehement passion for knowledge which urged this frail and precocious man, whose physical energies were always being sapped to the breaking point, to spend years in lonely thinking and to complete an achievement worthy of a martial hero. It is a proof of his modern character that his philosophical meditations read like the monologues of one who has abandoned the world on

[9] René Descartes (1596-1649) was fond of the Jesuit college at La Fleche, where he studied, but he must often have reflected upon the fact that his great and difficult fate was probably caused by his beginning to study at all. His was no ordinary assimilative mind. An everlasting "Why?" might have been proposed for his epitaph. Trained in scholastic doctrine, perplexed by the incessant conflicts between scientists and thinkers, conscious of the hiatus between the new things men were discovering and the old explanations they had given for all things, he wished at one and the same time to avoid controversy and to arrive at truth. Consequently his life was, for the most part, lonely and somewhat restless. He saw a good deal of the world as a soldier in the armies of Prince Maurice of Nassau and the Elector of Bavaria. And it was while in winter quarters near the Danube that he experienced his most intense hours of concentration upon the problem of life and the world. He arrived at three important conclusions: that all geometrical problems could be solved by algebraic symbols; that the mysteries of mathematics and the mysteries of nature are alike, and can be opened with the same key; and that the proper method for arriving at fundamental truth is the method of doubt. Some eight years later (1629) he took up his abode in Holland, wrote and published the most important of his philosophical works, conducted a lengthy correspondence that was to a large extent concerned with mathematical and philosophical controversy, and met a great many important personages. Queen Christina of Sweden invited him to Stockholm, where he died. His most important works are: *Discours de la méthode* (1637), *meditations de Prima Philosophia, Principia Philosophiae,* and *Traité des passions de l'ame.* There are volumes of comment by Mahaffy, Chevalier and Maritain.

principle, who has fled even the circle of his friends. But Descartes' view is nobler than Bacon's, directed as that was to the acquisition of power. He wishes to know truth, not to possess or enrich the world. The works of Descartes are not, therefore, chilly statements of the results of investigation. They possess a charm derived from eager search and lofty discovery. Because of their quality, mathematics became for a long time the prototype of sciences. Not only Descartes the great mathematician and rationalist, but the normal philosopher everywhere leaned toward the belief that cosmic *reality* could be explored with the method of the *ideal* science of mathematics. Descartes' sound common sense guarded him against too great a reliance upon this science—a reliance which was to become the pitfall of Spinoza. Precisely because he was a creative mathematician, he did not cultivate metaphysics *more geometrico.*[10]

With him originated the valuable discovery that geometry absorbs perceptible elements and deals with them imaginatively. In this respect he was the great precursor of such men as Gauss [11] and Poincaré.[12] But in order to suborn this sensual element to a strictly intellectual operation, he transposed the figure into the formula according to the methods established by his analytical geometry. Here is the source of his fundamental principle: "that can be accepted as true which has been definitely arranged and clearly thought through, step by step." This principle is, to be sure, quite applicable to ideates. Descartes further distinguished sharply between a mathematical operation which

[10] "In the manner of geometry."

[11] Karl Gauss (1777-1855) was a German mathematician among whose achievements in mathematics was a new method for calculating the position of heavenly bodies.

[12] Henri Poincaré (1854-1912), perhaps the foremost nineteenth-century French mathematician and physicist, carried out brilliant researches in the domain of physics. See E. Slosson's *Major Prophets of Today.*

creates objects and a logical operation which adjudges them. In other words, the syllogistic structure of the Euclidian manner was not, for him, the convincing manner of presentation.

Nature

The study of nature should also (he declared) carefully differentiate all individual terms and then adopt a clear composite view of their coördinations. That during this process the experimental construction of artificial worlds (or their anticipation in thought) can help us only to steadily more accurate *approximation* to reality, is a fact which Descartes, like all other rationalists, had necessarily to overlook. For it is the characteristic of a rationalist that he accepts ideative constructions of reality for reality as such. A brilliant approximation to the actual condition later revealed by anatomy is to be noted, for instance, in Descartes' notion of the circulation of the blood. Not possessing any physiological knowledge of the nerves which control and regulate the heart, he described it as a kettle which heats the warm blood. Theories, however, no matter how self-contained and carefully thought through step by step, will save no one from overlooking real attendant circumstances so long as these have not been brought to the fore by analysis based on *observation.* Therefore Descartes did not escape (as he had hoped to) that battle among the sciences which he could, were he living now, see engaging the attention of the mathematicians also.

Skepticism

The quarrels of the learned—precisely the best among them—and the instability of their opinions were among the things which made the strongest impression upon Descartes as a young man. Indeed they plunged him into gloomy

doubt. His radical skepticism opposed every kind of traditional teaching. He recapitulated all the old skeptical arguments. He even conceded that one could go wrong in mathematics, seeing that some powerful demon might whisper false judgments into one's ears. But even this (he said) would not alter the unimpeachable conviction that it is "I" who am deceived, that it is "I" who doubt or think. "I" experience, and therefore "I" am. Thus a modern enquiring and critical soul arrived at certitude of self in almost the same words that had been employed by the peaceful, mystical spirit of Augustine. Here also certainty and knowledge, the thing known and the knowledge of it, became one in an intimate consciousness of self. In Augustine's case it was mystical meditation; in Descartes', the unshakable conviction of one passionately carrying on a quest for the sake of which the daring assumption—"I experience, and so I exist"—had to be made.

The universal statement, "Whoever experiences, is," can, according to Descartes, be inferred from this basic human experience. Therefore nothing deterred him from expressing this correct judgment about a fundamental experience in the theoretical formula, *Cogito, ergo sum.* "I experience, and *therefore* I am." The intuition of conviction irrefutable in practice is, consequently, something more than an analysis of an idea or a declaration about an imagined phantom. For idea and phantom are not so close to the soul as is the ego. Descartes, we see, had not solved the great puzzle of doubt in a coolly theoretical manner. Only the fervor of conviction, peremptory in practice, that the soul has metaphysical reality could, after all his radical skepticism, bring him to affirm the principle that the soul is a living substance without dimension. Theoretically the road he traversed is a long one, leading as it does from the ego to the mind. This road was, of course, more familiar

to Descartes, by reason of his scholastic training, than it would be to the average natural skeptic.

The Idea of God: Introspection

The soul, which has thus recovered confidence in itself, looks round now inside the domain of its undeniable experiences and thoughts. It locks its door against the uncertain outer world. This again is the achievement of a *will to meditate* which is passionately directed *inward.* From it are dissociated all consciousness contents which are *certainly* given from the outside, as well as many *uncertain* experiences. Then the contemplation of self, resolute of will, leads to the discovery of an incomparable individual possession, the idea of God—a concept which *intends the reality of that which it implies.* This primary important content of the soul is evident to it immediately after it has achieved an intuition of itself. The idea of God cannot, therefore, have its origin either in perception, or in desire which creates its ideal, or in an ideative projection. According to Descartes, there is nothing left to do but to believe that this *idea* has been given to the soul as a fixed primal possession by a God who *really exists.* This basic idea cannot derive from the universe of sensation, because that contains finite things only; it cannot derive from memory, because memory merely recalls things experienced; it cannot derive from the imagination, because this deals only with what is remembered; it cannot derive from a dream created by desire, because this could not think of genuine perfection but could only eliminate deficiencies from imperfection. Human thought and desire may coalesce to create the Olympian Zeus, but they cannot arrive at thinking the Eternal Goal of all thought and desire. One cannot reason out the Basis of all finiteness through arbitrary progress from degree to degree of finiteness, because this Basis is also

the Basis of him who reasons. Therefore the idea of God can come only from God.

It is not easy to be just to this proof. The Kantian objection that one cannot derive *existence* from an *idea* does not really affect Descartes' reasoning. For there is here no question (for Descartes) of mere thought processes any more than there can be question of such processes in the ego's consciousness of self. A specific fundamental experience of consciousness of God has supplied for the philosopher's thought an Object seen as perfect. This experience, however, is not mystical meditation in Descartes' case, but again the *conviction*, irrefutable in practice, of a seeker after truth who has been overwhelmed by his quest—conviction which makes it impossible for him to regard seriously any other thought than that which intimates that the human idea of God has its origin in a Divine gift. This conviction was a *proof* to the profoundly meditative mind of Descartes, and has been accepted as such by many other earnest men. But it is not theoretically compelling, any more than is St. Anselm's argument, because it remains possible that the counterpart of the idea is not a real but an ideal object. This was pointed out to Descartes by friends like Mersenne, and it was effectively repeated by opponents like Daniel.

Descartes could not see their point because the philosophy he adopted was much more blindly ready than the wisdom of antiquity had been to accept ideal objects, self-propounded and arbitrarily constituted, without an exhaustive comparison with reality as it is. In fact Descartes tried to base his initial principle, "That can be accepted as true which has been definitely arranged and clearly thought through, step by step,"—the basic principle of all excessive idea-realism—upon the truthfulness of God, who "does not deceive man." Error, to his mind, was therefore simply

too great a haste in desiring to acknowledge truth—a rash leaping over certain necessary stages in investigation. As a matter of fact, however, the error of rationalism antedates the moment when the carefully tested and developed hypothesis posited by the active intelligence is measured according to the partly inchoate, unarranged facts accumulated by observation. The greatness and existence of God, moreover, are made more effectively evident the more they are seen as towering above the cosmos in perfection. Not the man who reasons most clearly but the man who has the most comprehensive experience of the real world and its hidden coördinations will be most intimately convinced of the existence of God. Therefore the weight of the classical Scholastic proofs for the existence of God—which, in so far as is humanly possible, rest upon available experience,—remains much greater than the power of Cartesian meditation.

This becomes more evident when one observes to what an extent Descartes' proof relies upon Scholastic tradition. For example, it involves the premiss that creative causes must be richer and more perfect in unfolded reality than created effects. Though this premiss is *correct*, a philosophy based on doubt and "minus assumptions" ought not to have introduced it casually as *self-evident*. Thus it becomes clear once again that no present is able to think without reference to its past. To attempt doing so is merely to disclose poverty of experience. Cartesian rationalism, which overestimated ideative constructions otherwise so very valuable, underestimated (in a spirit of one-sided systematizing) observation to such an extent that it considered all the facts supplied by perception *confused* in comparison with the *clarity* of thought itself. This spiritual attitude was, of course, typical of classical French culture, with its

bright light and firm shadows. Indeed this culture was extraordinarily Cartesian in character.

Body and Soul

The rigid norm established by Descartes' rationalism further implied that matters which reason had separated were also estranged from one another in reality and, in fact, could hardly be brought into harmonious relationship. Thus God is perfect, eternal, real Substance; the human soul is finite, conscious substance; but the matter of which the body is made is extended substance. It therefore requires Omnipotence to create soul and body and to preserve their coherence in man. This extreme dualism (which later on polemical materialists would strangely enough consider typically Christian) simplified the methodology of special science very cleverly and to a certain extent purposively, but rendered impossible any genuine metaphysics of personality. *Physics* measures only the movements of extended bodies, quite as if there were question of stereometric and not of impermeable matter. Looking from its point of view, Descartes viewed the animal as a machine like the human body, in which alone a soul that touches its residence only in one spot of the cerebrum dwells in a manner truly marvellous. *Psychology*, for its part, is concerned (and to some extent purposively) not with the mechanics of the body but with the teleology of experiences. Descartes therefore considered it a kind of miracle that bodily movement in conformity with spiritual principle, or passionate disturbance of the soul's serenity by states of excitation existing in the body, should occur. *Ethics*, which tries to clarify and temper passion through reflection and thus to order movement, has hardly any place in the Cartesian system. If one were to accept its truly lofty point of view in spite of these difficulties, it would be necessary to put up with an exaggerated

estimate of calm meditation at the cost of negating an effective interchange of influence between governing soul and morally educated body.

Occasionalism

To these matters which had not been clearly thought out, the Cartesian school devoted its earnest attention. If the soul is estranged from the body, and if it is not a substance intimately interwoven with that body,—a ruler of its energies, a victor over but also a guide of its impulses and instincts,—then every community of effort existing between the two must be the result of Omnipotent intervention. Such a principle limited freedom in a manner almost Arabian, and sometimes Omnipotence was even made a partner in the act of sinning. Some fancied, however, that heaven was, in a manner, absorbing earth, and that here as there the soul entrusted itself willingly into the Divine hands. To this modification of the Cartesian teaching, *Occasionalists* such as Geulincx,[13] who conceived of human resolution only as a reason for the effective intervention of God, were inclined. Their point of view was then developed into a system by the gifted and lovable Malebranche.

[13] Arnold Geulincx (1625-1669) was a professor in the department of philosophy, in the University of Leyden. During his earlier years he had taught and studied at Louvain, leaving there to join the Calvinists. It is customary to distinguish two aspects of Geulincx's teaching: *Occasionalism,* which holds that man has no consciousness of how his will causes movements of the body or of external objects, and that therefore the ego does not effect these movements—God decreeing that material things be the "occasions" of effects He causes; and *Ontologism,* which avers that since one cannot be the cause of a happening unless one knows how it happens, man (neither physically nor spiritually) can be the cause of a sensation. Man does not know "how" a sense-stimulus becomes a "sensation" and must therefore believe that the sensation (and so all knowledge) is caused by God, who uses the body and the stimulus of the body as the "occasion" for His act in man.

3. Malebranche

Descartes' sincerity of purpose and his principle of beginning to reason with an acceptance of doubt naturally made a strong impression upon thinkers who possessed the temperament of St. Augustine. Secondly, the circle of the French Oratorians, a religious community which then numbered many gifted men in its ranks, had brought forward thoughtful objections to the methods of Cartesian investigation. Both these circumstances urged the greatest of the Oratorians, the refined thinker and classical stylist Malebranche,[14] to devote his energies to clarifying those aspects of Descartes' reasoning which remained vague and inconclusive. He did not attack its blunt assumptions. He also began by taking it for granted that things separated in idea,—in a preliminary, purposive, scientific manner,—are separated also in reality.

Real and Ideal Separation

Let us recall to mind that logical, ideal and real separations do not produce their effects in one and the same way. For example, we can dissect real bodies in such a manner that we destroy or demolish them so that they cannot be rebuilt. On the other hand, we can divide them and put them together again, reduce them to their elements and recombine them, analyze them chemically and synthetize them.

[14] Nicolas Malebranche (1638-1660), it should be remembered, was a singularly noble and spiritual man who typifies one important aspect of the French seventeenth century. Born in Paris, he joined the community of Oratorians (a religious society founded by St. Philip Neri) in his native city. Study being one of the good works encouraged by the religious rule he followed, he devoted himself to the pursuit of philosophy as far as his feeble health would allow. *Recherche de la Vérité* ("The Search after Truth"), his most important work, appeared in 1675. H. Joly's *Malebranche* is perhaps the best treatment of his life and thought.

We can cut an organism to bits, or we can dissect it according to the structure of bones, muscles and nerves. But divisions made in an ideal object prove to be entirely different. Here one can add and subtract without destroying. Logically it is possible to separate "brightness of color" from a surface, while changing the real object as little as one changes the ideal image of that object. This division in idea can neither be carried out in practice nor symbolized. Wherever it takes place, one does not *see* what happens: one merely *intends* it, *knows* it. Moreover, one does not *see* substances, but one correctly *thinks of* substances; one does not hold effects in one's hand but calculates them, which is sufficient.

During the initial stages of modern psychology, people often supposed that a thing of which they could form no clear and definite mental representation did not exist—which meant, in the final analysis, that the thing was not apparent to the senses. Accordingly they doubted the operations of energies, they even doubted the existence of substances which achieve effects. They did not, we see, distinguish between that which is *thought of* clearly and definitely, and that which is *imagined*—or represented from memory—clearly and definitely. Obviously many things can be thought of clearly and definitely which as such exact from us the statement, "I cannot imagine anything like that." What a body "does" in exerting an influence upon another body cannot be visualized as something like "spiritual contact." And as a consequence of this confusion Malebranche repudiated the effect of thing upon thing, of body upon soul, as unthinkable (which word should have been "unimaginable"). His reasoning would be incomprehensible were it not for the fact that it is based upon the favorite assumption of the unrestrained modern investigator that nothing can be accepted as real which has not become

perfectly clear. He does not wish to concede more to a real thing that he can attribute to his ideate of that thing. Malebranche's thought grows round this violent principle.

In common with the Occasionalists, he considered that movement of the body and action of the soul, as they are joined in perception, could be accounted for only by recourse to the assumption that there had been direct intervention by Omnipotence. He denied that there is any direct action of one body upon another. As a consequence his metaphysics was powerless to investigate nature. It is hardly of this world, it seems to storm Heaven.

Malebranche's Metaphysics

A gulf separates God and the soul, holy truth and erring sin. There is a similar chasm between spiritual and corporeal substances. The inclination of the soul toward a world full of deceptions is the consequence of original sin. But this soul can cross the gulf to God on the arc of mystical light. Malebranche warns against the desire for power which lies at the root of *technical scientific mastery* over the world, and declares that such things can never bring salvation. He wishes to build up in his own way a *science of man*, of the soul. With Descartes he holds that the cause of error is an over-hasty affirmation of the phantasms supplied by the external world. Man is free to fall into this sin of precipitate error. Hypotheses should, therefore, be accepted only tentatively. This genuine truth Malebranche preached effectively to the natural sciences, but he himself did not abide by it in constructing his philosophical theory. Like Descartes he underestimated the truth which observation supplies. He was clear-sighted enough to detect sources of error such as occur in the perception of shapes, and in inattentiveness to minute creatures; but he quite overlooked the winnowing process by means of which such errors are

eliminated. He emphasized pertinently the essential differences between stimulus and sensation. The sensations (he said, however) are the intimate property of the soul. Man ascribes them to things and thus his soul seeks its own everywhere in the world.

This doctrine was plausible in the seventeenth century when nothing seemed more certain than the non-objectivity, the absolutely uniform subjectivity, of sensory qualities. Goethe [15] was, one may note with interest, the first modern thinker to protest against this point of view. Malebranche even thought it materialistic to admit that things and their movements are causes of stimulus. It is difficult to reconcile with this exaggeration his brilliant intuition that many assertions of the senses are interpreted falsely if one regards them as giving information about things rather than as aiding the preservation of the body by giving warnings or supplying enticements. Does not this imply that the body, at least, is related to the material outer world? This question, it is true, greatly disturbed much modern idealism. Malebranche answered by recognizing the reality of things in the outer world:—it was the possibility of human knowledge of these things which he denied. Bodies (he said) do not create sensations in us, nor do they figure in our perceptions. Sensation is an excitation of our souls, and it is God who effects it in us because it is He who comes into direct contact with our souls. He is the Great Self who approaches the little human self. *Man sees all things in God.* Viewed uncritically, Malebranche's idea is a theory of life in the next world, where all bodies shall be transfigured.

Psychology

Since, therefore, it is God who first informs the soul that there is a body, Malebranche did not have to dispense with

[15] See page 405.

the body in his psychology. Thus he was able to formulate a considerable number of discriminating psychological precepts, valuable even though they seem forced into his system. Excitations of the body (he declares) produce excitations of the soul, and vice versa. This community of excitations he explained, in a manner reminiscent of the Arabs, is the direct result of Omnipotent action. The real outer world, he added, however, is not accessible to our observation. There is no relation of representation between the thing, the stimulus and the sensation. This assertion by Malebranche has been honored throughout modern philosophy as a great revolutionizing discovery. Nevertheless it is false. The more adequately and accurately (in the mathematical sense) one grasps the notion of "representation," the more probable does it become that, in spite of various profound transmutations, the relation between object and perception (between what are technically termed ontogram and phenogram) is precisely that of "representation." From what source do these perception images come to the soul? This soul cannot, though it is endowed with reason, create them out of itself. Even in formulating mathematical figures it must make use of much which it itself does not arbitrarily produce—a fact which Malebranche himself, in a moment of profound insight, clearly realized.

Divine Vision

Our philosopher, however, took refuge in God who, though far above the realm of sensation, knows that our souls are capable of sensations and therefore constantly awakens them in us. Therefore we see all things in God, the soul first finds itself in God and cannot become conscious of other souls unless it makes their acquaintance in God. God is the first object of knowledge, the light in which alone the world is revealed. He only knows the basic nature of things,

because He only is their Creator. This is surely a vision of an ideal world, the nobility of which nobody will disregard. But is it *our* world—the world in which we live maimed by suffering and evil? Is it our earth, the home of men whose wills are inconstant? Malebranche, lofty of mind and heart, completely lost sight of the real universe as he fashioned his extravagant fantasy and drifted into apocalyptic speculation and Pauline other-worldly contemplation. Philosophy, however, must always face with painful earnestness the truth that our terrestrial earth is not the supernatural Jerusalem. We cannot as yet achieve the vision of the Perfect. We grope in the dark and seek to know God Himself through analogies.

Suarez

Truth is served most effectively by recognizing the limitations of human knowledge. Not misled by any manner of seductive dreaming, the classic tradition of wisdom kept to its dependable narrow path. It did not escape the penetrating intelligence of Suarez,[16] the eminent Jesuit Scholiast, that the Cartesian proofs for God's existence are, like the argument of St. Anselm, marred by want of contact with reality. He himself advocated the necessity of thinking through all the varieties of dependency which experience encounters and of then making an equally careful examination of their coördination and their dependencies. Were not the comprehension of man so limited, the theoretic proofs of the Divine existence would convince all and explain the world to humankind. If one could know the cos-

[16] Francisco Suarez (1548-1617), taught at Rome, Salamanca and elsewhere, and is often given the title of *Doctor Eximus. De Defensione Fidei,* a famous work in which Suarez outlined the principles of good government, was hated and forbidden by many absolutistic princes. He was a voluminous writer.

mic weave of all causes, it would be impossible to doubt that there is a First Cause of all causes. If one could fully unmask the purposiveness of the living organism, which serves itself and others, it would be impossible to doubt the wisdom of the Creator. If one could encompass the whole hierarchy of forms, from the poorest to the most perfect, one would inevitably discover the ultimate Former of all forms. If one could detach oneself from every necessarily shortsighted theory of the cosmos and master the experience of all the world, belief in God would be the most natural of all things. In this admirable fashion Suarez summed up what traditional human reason, earnest about its quest, had untiringly restated concerning the reality of the Divine.

Malebranche, richly gifted, was related in temperament to the upright Anglican Bishop George Berkeley.[17] Here too was a classic stylist and an epoch-making psychologist. It is related that when the two men met, Bishop Berkeley asked the Oratorian Malebranche why his philosophy was concerned with the world of bodies, over and above God, the soul, and the Divinely created representations of things. The dark matter of this world could pass away without man's—in Malebranche's theory—being aware of the catastrophe. Though the anecdote may not be true, it makes an excellent point. It lets us see the world that Berkeley saw. His idealism is, we grant, the counterpart of an equally exaggerated materialism. But it is too lofty for service in this world. We shall return to Berkeley later on.

[17] George Berkeley (1685-1753), one of the most idealistic of modern thinkers, was concerned throughout life with many realistic men and events. The dates of his life and death should be noticed, because though he is mentioned here by reason of his association with Malebranche, his habits of thought were greatly influenced by the philosophy of John Locke. This was popular at Trinity College, Dublin, to which Berkeley (who had been born at Dysert, Ireland) came.

Blaise Pascal

Malebranche closed his eyes to the unfortunate contrast which exists between fallen man and God who is holy; between corrupt nature and the bliss of contemplation in the presence of the Ideals. In this respect he was corroborated by the culture of the pastoral poets, by the age of enlightenment, and even by Jean Jacques Rousseau[18] the romanticist. This chasm between the basic Reality of the world and the soul estranged from its Maker was, however, precisely the actuality which Blaise Pascal[19] brought into the limelight of his religious philosophy. If such a thing were possible,

[18] Jean Jacques Rousseau (1712-1778), the author of modern "Romanticism," was not so much a thinker as a generator of currents of feeling. His *Confessions, La Nouvelle Héloise* and *Emile,* had, however, considerable influence upon later philosophers. See I. Babbitt's *Rousseau and Romanticism.* We shall meet him again on page 370.

[19] Blaise Pascal (1623-1662), a man of astounding and precocious genius, was born at Clermont-Ferrand, France, and later taken to Paris by his father. The early vigor of his mind may have been due to some extent to his education; but undoubtedly his ability to master mathematics to such an extent that he profoundly modified this science before he was twenty years old can only have been due to unusual gifts of intellect. Pascal's first "conversion" was due to his having read certain Jansenistic books. As a result he attacked the Jesuits in the *Provinciales,* a brilliant ironical polemic which changed the spiritual history of France. Later on as a result of a still more impressive experience, he drew nearer to orthodox Catholicism, in harmony with which he died. In this state of mind he planned to write an "Apology for Religion," which was to be nothing less than a complete defense of the Christian faith. But the attacks of illness to which he had been subject throughout life prevented his carrying out the project beyond a series of notes or "reflections," which were published after his death as the *Pensées.*

The original text of this work had been much altered and emasculated. It was only gradually that scholars succeeded in reëstablishing the work which Pascal himself had bequeathed to mankind. Our best text is that edited by Brunschvig. A whole literature of comment has grown up round Pascal's life and work. Among good books in French are those by F. Strowski, E. Boutroux, H. Brémond, and V. Giraud. Negative criticism may be found in P. Valéry's *Variety.* A good brief account, on the whole impartial, is that given in R. Doumic's *Histoire de la Litterature Française.*

the happy complacency of materialistic civilization, which asserts that its convictions are established upon the conclusions arrived at by mathematical natural science, ought to be profoundly disturbed by the life and thought of Pascal. He appeared as a scientific mathematician of the first order of genius—a man who not only distinguished himself during one portion of his life by making discoveries in physics, as Kant did, but who remained throughout life an explorer whose scientific findings continually surprised the world and a defender of Christianity with ideas that have a singular creative clarity and a lasting significance. In all truth he had not a little of the passion of Tertullian.

At the age of fifteen, entirely without guidance, Pascal had solved the first thirty-two problems of Euclid in a terminology devised by himself and was composing a treatise on conic sections which Descartes refused to believe could have been written by a man so young. Later on his brilliant experiments proved that atmospheric pressure was the active agent in the barometric pillar invented by Torricelli, he devised a calculating machine, and he developed in company with Fermat [20] the most important of modern mathematical innovations. Yet this man was not in any manner persuaded by his scientific successes to separate himself from the Christian faith. Nor can it be said of him—what might, perhaps, be advanced concerning many other men—that he amassed scientific knowledge without entering into the spirit of science. He always spoke with great respect of the state of mind required for honest, unprejudiced investigation, and agreed with Descartes about the requirements for scientific clarity and demonstration, just as he accepted the Cartesian proof of the existence of the soul and made it his own —meanwhile tracing, in a remarkably perceptive manner, its relation to St. Augustine. Pascal also admitted that

[20] Pierre de Fermat (1601-1665) was a celebrated French mathematician.

the implements of thought are sufficient for the purposes of mathematical science. This carefully describes the objects to be investigated and permits of no uncertainty about the conditions to which these are subjected for the purposes of demonstration. It can even supply information about axiomatic assumptions. Its concern is, therefore, with what is clearly and definitely demonstrated, to use the Cartesian and Pascalian expression.

Practical Philosophy

But the case is wholly different when there is question of the conclusions of science about such complex entities as the real human being, his psychic life, his passions and needs. With reference to these the implements of science prove insufficient and unsatisfactory. In making this declaration Pascal was not attacking the range of analytical thinking in the sense of antique skepticism but was directing attention to the unusual difficulties involved in knowing complex reality. It is incalculably difficult to observe all the measures of precaution outlined by *logic* when one is face to face with a complex real object; and of course those measures are our guarantee that satisfactory knowledge of the thing at hand will be secured. But even when this difficulty has been obviated, the accumulation of knowledge gained will still be abstract in character: we know aspects of the thing, moments and component parts, but not the concrete reality. In so far as the psychic life of man is concerned, nothing "simple," in the sense employed by natural science, is obtainable. It is, therefore, no wonder that after simple logical consideration and analysis of those components of psychical life which alone are accessible to us, the correctly formed judgments arrived at contradict one another. Thus Pascal discovered *antinomies* which undermine every arrogant certainty in all the deliberations of

intellectual science. Scientific thought, theoretic knowledge, fail to provide a perfectly adequate view of man. Pascal declared there was another method of investigation which might be termed the "practical way" without unduly forcing the term. We must make up our minds to *act;* and then unavoidable convictions will force themselves upon us.

If we act according to the mandates of the Christian religion, we become conscious of how all our nobler spiritual powers are strengthened, of how we then arrive at recognition of the freedom and immortality of our souls, of the existence of God and of the Divine will. Every form of resolute action, however, leads to this same necessary conclusion. The steps of this progress are described by Pascal, with that perceptiveness which is the characteristic of genius, in his analysis of the human heart and its ineradicable division. We struggle unselfishly for pure truth, we take pleasure in the beauties of art, we long for purity and magnanimity, we admire the courageous virtue of self-sacrifice; but on the other hand we lose ourselves in the meannesses of the day's strife, in the blind enjoyment of existence, in the crudities of sensual desire. Pascal never tired describing the evil which the unbridled erotic impulse brings upon the earth; and despite his charitable heart he sat as the unmovable judge of man's passions and weaknesses.

The ineradicable human duality is not, he declared, to be deduced from some causes incident to the world apart from man. It is deeply anchored in the human breast and can be understood only in the light of moral philosophy. The sole satisfactory explanation of it is offered by the Christian doctrine of original sin, and the only hope of escape is the Christian doctrine of Redemption. Pascal thus boldly assented to that pessimism about this world which characterizes the Christian view of life. As we have seen, his religious thinking is "practical," even though it is the expres-

sion of a mystical temperament. For the practical thinker, life's experiences determine which religious philosophy first reveals itself to the mind. In Pascal's case the determining experience was consciousness of the great gulf which lies between the soul's longing for God and the errant, uncontrollable self-will of man. He emphatically declared that this point of view, though supra-scientific in character, did not in any way contradict reason:—that, in fact, war cannot be successfully waged upon Christianity with logical or discursive methods. Pascal himself was, therefore, a Christian of profound convictions. Complete separation from the world was an individual experience which he thought so extraordinarily significant that he described the hour of its occurrence in words as enduring as granite.

4. French Classicism

The Cartesian manner of thinking, with its tendency toward invention, its over-confidence in philosophic theory and its cool grandeur, is not only a characteristic of modern speculation but also, at least in so far as French art is concerned, a characteristic of modern culture. Self-certainty was heightened in France's poets; and they were concerned, in a spirit of rigorous enthusiasm, with rationally thinking through their work and its effects. Take for example their dramas, which eliminate all residues: the characters are predicated by the poet, the episodes take place as punctually as the rising of the sun. The delicate flexibility of older poetic language, which seemed to vibrate tremulously because experience of the world and knowledge of men do not retain the firm rhythms of art-forms, is not to be looked for in the classic French playwrights. Of course only untutored prejudice holds that the marble calm of their school is a fault, that it abrogates beauty. Their virtue is clear-

ness and definiteness of construction, not riches of material dealt with.

The coveted goal is the expression of designing and masterly reasonableness, acting according to rules organized by careful thought. "Good sense" as something characteristically modern, as mature and uncircumscribed (at least in its own opinion), is identified with human nature. Not the traditional, pleasantly active "reason" which we see so clearly even though it be associated with the rest of many-sided human being, is the accepted standard, but a "reason" which regards its fraction-worlds as the whole world, and which—to take an instance—labels the park at Versailles (though that is of course a remarkable creation of the intellect) "nature." Poets having a mental temperament of this kind were gifted, as hardly any other playwrights in history have been, to create a nobly rigid drama rich in carefully planned and definitely visualized scenes, firmly outlined characters and relatively unimpassioned language. But behind the heroes, who never fail to find the right word, there does not rise—as is the case with the great Greeks, the Spanish masters and Shakespeare—the wide world.

Spanish poetry influenced Corneille,[21] most vigorous of the French tragedians. His masculine heroic pathos inculcates the important thought that "love," when made the only possible and constantly recurrent motif of tragedy, becomes threadbare and unconvincing. This thought Corneille expressed in rimed couplets, quite in the same fashion as Shakespeare had said it with easy cheerfulness in *Midsummer Night's Dream.* But formal as Corneille's manner was, it seemed to the advocates of rule too irrational and unnatural. Corseted in a rigid antique measure, the Jan-

[21] Pierre Corneille (1606-1684) was the author of several masterpieces of the French drama, *Le Cid, Polyeucte,* and *Cinna.*

senistic temperament of Racine [22] felt at home. His pathos, reminiscent of the prophets of the Old Testament, rises in *Athalie* to magnificent power in the expression of deep conviction.

The noblest fruits of this "classicism" in art were produced by comedy. It is easier to adapt sharply circumscribed type characters, who can never step out of their parts, to the requirements of farce. The refined and educated Molière,[23] possessing immortal satirical genius, etched the modern forms of braggadocio with destructive irony. Unequaled are his characterizations of upstarts with a mania for art, of professional invalids, of men to whom religion is an excuse for hypocrisy or an instrument they can misuse. Always he manages somehow to bring to the surface hidden misery, a hopeless absence of bliss. When his miser sits absolutely alone with his treasure, the scene grips us almost as actual suffering would; and the complaint which Molière allows the Misanthrope to overhear seems almost like his own sorrow—the malady of genius. How many of his characters are unforgettable masterpieces of irony!

"Good Breeding"

To a considerable extent French poetry followed a theory of æsthetics—whereas, as a general rule, æsthetics is gathered from poetry and so follows it. Remarkably enough people actually became poets by studying the rules of prosody. Bards of noble birth swore by the poetics of Malherbe [24] which (in genuine Cartesian fashion) distin-

[22] Jean Racine (1639-1699), influenced by the Jansenists to such an extent that he gave up writing for the theatre, was the author of *Berenice, Esther* and *Athalie.*

[23] Molière (Jean Baptiste Poquelin), greatest of French and possibly of all writers of comedy, was born in 1622 and died 1673. *Le Misanthrope* is among his most important productions.

[24] François de Malherbe (1555-1628) undertook to carry out a "severe

guished between words that were noble and clear, and words that were commonplace and chaotic. Why should one (they asked) speak of "shadowy" night, when nights are prevailingly dark? A Cartesian mentality was also the source of the Académie Française,[25] an institution probably incapable of imitation in other countries. Its code of "good breeding" repudiated, logically enough, classical antiquity as it was and demanded another conveyed in an untranslatable phrase—*antiquité mondaine*. "Nature" became whatever happened to be the reasonable conduct of courtly society—it was "precious," classical, or pastoral.

There are, as a consequence, obvious reasons why Boileau [26] defined art as the imitation of nature. The transparent "nature" he had in mind was courtly and pastoral. Judged by its standards, cosmetics and beauty-spots were genuinely natural. Obviously, therefore, the modern humanistic concept of nature had travelled very far from the classical concept of nature, even though the *nature of man* was identified once again with man's endowment of reason. "Reason," however, was thought of in modern terms—it was unbridled, exaggerated, relatively intoxicated. As soon as it itself was endangered, its notions of man and humanitarianism began to waver alarmingly.

One must add that as a consequence of the religious strife which characterized the seventeenth century in France, many Catholic prelates were drawn into the philosophical debate. The more important among them created lasting works of love, beacons of genuine Christian humanism.

reform" of French verse-writing in his time, attacking both erudition and looseness of expression.

[25] The Académie Française, or "assemblage of forty living immortals" as it is sometimes called, was officially organized by Cardinal Richelieu in 1635. It is the custodian of the dictionary of the French language.

[26] Nicolas Boileau (1636-1711), critic and poet, is the author of an *Art poétique* from which Alexander Pope derived his *Essay on Criticism.*

Fénélon [27] praised sacrificial mystical love; Bossuet [28] celebrated that temperance of soul which does not surrender to fancy. St. Vincent de Paul [29] organized his army of the merciful for the relief of the poor. In the books and deeds of these and others was to be heard the quiet reply of Christian belief to the rapidly intensifying declamations of naturalistic man.

[27] François de Salignac de la Mothe-Fénélon (1651-1715), was first a priest, then tutor to the Dauphin, and finally archbishop of Cambrai. Though he was a poet, he is renowned chiefly for various treatises dealing with proofs for the existence of God, the proper education of younger women and similar themes.

[28] Jacques Bénigne Bossuet (1627-1704), bishop of Meaux and one of the greatest of pulpit orators. He takes rank among philosophers not merely by reason of the great influence he exerted upon other thinkers, but also for such books as *Discours sur l'histoire universelle* and *Histoire des variations des Églises protestantes.* There are good discussions of his work and personality by Lanson and Rebelliau.

[29] St. Vincent de Paul (1576-1660), founder of the Sisters of Charity, is also the patron of modern lay organizations which dispense relief to the poor.

CHAPTER III

MODERN NOMINALISM, PANTHEISM AND SPIRITUALISM

1. Materialism and Thomas Hobbes

It is not surprising that materialism should have been one of the manifold systems which the post-Renaissance opposition to Aristotle restored to life. The growing decay of insight into the meaning of history was particularly favorable to the system of Epicurus, which once more received enthusiastic applause. People who believe that a solution of the cosmic riddle can be based upon a few experiments, repudiate every consideration of the knowledge reaped by the past, convinced as they are that all of this (not being experimental in character) has been outdistanced. It is true that an experiment has to do with a limited, artificial world and that one is not justified in reasoning from it to the universe as a whole. Details like this do not, however, disturb the pamphleteers of materialism. On the other hand it is the normal effect of science to dissipate the dreams of that pantheistic-fantastic speculation which accompanies almost every beginning in the study of nature. It was natural that a thinker as clear-sighted as Gassendi should make very significant objections, from a Democritean point of view, to the exaggerated idealism of men like Descartes. Materialism, however, never gets much farther than such objections, even though it may succeed in making some of its theories fashionable.[1]

[1] Note: See, for further information: F. Ueberweg's *History of Philosophy* (Vol. 2); H. Höffding's *History of Modern Philosophy;* and W. Turner's *History of Philosophy.*

Hobbes and "Association"

An interesting and highly intelligent attempt was made by Thomas Hobbes [2] to transplant the materialistic interpretation of the universe into the field of political science. In so doing he expressed many an idea worth meditating. He proceeded towards his goal from a nominalistic theory of knowledge, not without taking what may be termed somersaults of thought. In common with the entire world of his time, he held subjectivity of sensory qualities as an unshakable assumption. All psychic contents (in his view) consist of sensations—evidences of the presence of bodies—or of derivatives from sensation. It is true that Hobbes, like everybody else who has made the attempt, failed to effect a demonstration of this theory, which was to be restated so often after his time. Because (in his view) every sensation is unique in character and not to be repeated exactly, a "universal" can appear only when the elements which are not identical in all the individual cases are forgotten. Such eliminations result in the simplified representations of memory, with which new sensations can then

[2] Thomas Hobbes (1588-1679) lived through an era in English history when the problem of government arrested the attention of all thoughtful men because of the conflict between the Stuart kings and the Puritan reformers. Born in Wiltshire, England, he was educated at Oxford and later made lengthy visits to Paris. There he met various scientists and thinkers, and formulated his own doctrine. This is expressed, for the most part in *Leviathan,* which deals with the "matter, form and power of the ecclesiastical and civil state," and *Elementa Philosophiae,* a three-part treatise concerning "the body, man, and the social order." There are expositions of his work and character by Robertson and Tönnies.

Men more or less contemporary with Hobbes dealt with the same problems of government in relatively enduring books. Alberico Gentili (1552-1608) discussed the law of war; Althus (1557-1638), a German thinker, studied the Roman law. Greater than these, however, was Hugo Grotius (1583-1645) whose *De Jure Belli et Pacis* is one of the great source-books of international law.

be *associated.* Naturally it would be useless to inquire of a thinker like Hobbes: "*Who* forgets and associates? *What is he?*" We are merely asked to believe that to the "universal representations" in turn arbitrary and collective symbols may be attributed, and that thought is, consequently, a schematic, arithmetical operation with such symbols. Hobbes does not offer us an algebra of these operations, for the simple reason that such a thing cannot exist. Judgment is patently more than an association of symbols, as may be discovered by frankly considering these questions: Are there *true* and *false* symbols? How do symbols carry out the principle of contradiction? It was, of course, natural that Hobbes should not have asked such questions.

Properly established symbols (the associationist goes on to tell us) refer to sensations which have been partly forgotten, but beyond them directly to bodies and only to bodies. Therefore there is no reality unless it be that of bodies, and he who defines reality is also a body. This is precisely what Hobbes believed. Only infinitesimal component particles exist and these move according to laws which permit of no exception. Space is therefore the *exterior form* of bodies, and time is the form of *external movements.* The most highly rarified bodies, those of men, are known when the movements of their smallest parts have been calculated. These delicate movements are the activities of the soul. But repetition does not make this age-old materialistic principle more convincing, even though one ascribes the soul movements to vibrating nerve-fibres rather than to "fire atoms." One may describe them as fantastically as one cares to. Indeed, even if we knew what goes on in the cerebrum as accurately as we should like to, no discovery made there would be the same thing as "experience."

Hobbes and Political Science

Hobbes essayed a provocative simile (though it was only a simile) when he described human society in its highest stage of organization as a body—a state organism. Since only bodies are real, and since the state is actually here, it must be a great body—Leviathan. Moreover, whatever happens in this state is subjected completely to the laws of nature. Being a materialist Hobbes was not dissuaded from holding his theory by the fact that nobody has ever successfully formulated a universally adequate code of natural laws to explain either the life of the soul or the life revealed in history. He taught that the mechanical motive-power of the state-machine is the egoistic instinct of self-preservation. This power cannot, it is obvious, be reckoned in kilowatts. Hobbes' description, however, portrays the state as a mechanism made up of self-sustaining body members. His theory that all men act only as their selfish interests dictate serves the purpose of a working hypothesis in the domain of economic and political statistics, but overlooks those noble and spiritual deeds without which no society could live.

Hobbes' view is eminently modern. Antique philosophy also mistook ideative part-worlds for the whole of existing reality, thus demonstrating the weakness of human intelligence. But its horizons were vaster because it had not so completely disintegrated the work of the mind. After the Renaissance, idealism had been composed of fewer and more limited elements than ever before. Just as Cartesian rationalism was modern because it praised a construction drawn up mathematically as being descriptive of reality, so also the ethical materialism of Hobbes was modern because he based his mighty doctrine on a concept of man shut off from all the world by his own egocentric urge. Our philos-

opher himself was, like Descartes, isolated and friendless throughout life. He saw the basic element of the state in man isolated in nature—Robinson Crusoe, if you will. Thus he may be said to represent that part of modern mankind who have been driven back out of their dreams to a view of individual human nature scourged by impulses. What is man solitary in the state of nature, so far as we can know from experience? Hobbes asked this question earnestly, with true English candor. Not (he answered) a tranquil sleeper or a mild Puritan, as the cheerful illusions of idyllic poets would have you believe. Like Michaelangelo and Shakespeare, Leonardo da Vinci and Calderon, Hobbes' definition is *homo homini lupus*—"the man of instinct is a wolf toward the man of instinct." The state of nature is a battle for existence, it is the war of all against all—*bellum omnium contra omnes*. Here is the first flash of the theory of natural selection.

The "State of Nature"

In this expression of his deepest perception, Hobbes was certainly the forerunner of Darwin and Nietzsche. It is not, however, a view upon which any comprehensive theory can be built without doing violence to reason. The idea of a "state of nature" wherein savages massacre each other throws fierce light upon the corruption of human nature but it is not an historical condition. Throughout the whole past of man common custom and government have prevailed. Never, if the information historians have gathered means anything, have men actually conversed about or signed that "social contract" on the basis of which Hobbes sought to explain the regulation of conflicting individual desires and the grant of governmental power. The order of the state is not a human creation, and only very modern and

chaotic states have sought to clothe themselves entirely in the mantle of a governmental contract.

By means of his cold and brilliant theory, Hobbes served the interests of absolute monarchy. Individuals who, abandoned to their own resources, succumb in the battle for existence, decide (so ran the theory) to delegate their powers to a single absolute ruler. Logically enough their originally unlimited freedom of thought and action likewise go over to this king. So mighty is his rule that he has sway even over the religious faith of the country. For religion, Hobbes asserted with the cynicism of his time, is a superstition useful to the state. It proves a harmless instrument, however, only when the church is unconditionally subject to the civil power. A church which claimed to be universal would, therefore, have to be opposed with all available weapons, because in such an organization there would be room to foster indignation concerning the absolute monarch's possible misuse of power. Obviously this theory of government is so narrow that even the simile of a "state body" does not fit into it. If the state be a body, then every state must have a growth quite its own; and if this is true, it is impossible to demand the same form, organization and activity from all. Hobbes probably desired, however, that there should be absolute uniformity in the political world.

Bellarmine

His idea of the "social contract" naturally attracted much keen attention. It was Cardinal Bellarmine[3] who first analyzed it fully. He began by localizing the mo-

[3] Roberto (Cardinal) Bellarmine (1542-1621), author of *De Controversiis, De Laicis, De Summo Pontifice,* was one of the most highly respected controversial writers of his time. See *The State and the Church,* by J. A. Ryan and M. Millar. Broderick's *The Blessed Robert Bellarmine* is the standard English biography.

ment when the objective might of a kingdom is enfeebled and surrendered, when unfettered freedom necessarily and thoughtfully takes up the reins of government, and when the war of all against all—the battle for existence,—really breaks out. This revolution then constitutes itself a "social contract." To such a conclusion, Bellarmine contended, the post-Renaissance ideal of an absolute monarch and an absolute state would necessarily lead. True though it is that government is Divinely endowed with an essentially noble authority to ordain men's temporal affairs, this power wanes when nobility is squandered in the pursuit of selfish ends, in forgetting the obligations of leadership, and in slovenly neglect of the burden of responsibility for a people who need good rule. Then the state can no longer pretend to an endowment of grace and honor. Its hollow might confronts the greater strength of the populace, against whom it can advance no just claim. The untrammeled freedom of the ruling individual leads to one end—the untrammeled license of a mob decomposed by the absence of unifying leadership.

2. Pantheistic Monism: Baruch Spinoza

Descartes had defined three substances—God, the soul and matter—as basic realities. According to his teaching it would be inconceivable and impossible (as Geulincx observed) that the soul and the body should arrive at anything like what might be termed a common working agreement. Cartesian theorists therefore took refuge in the miracles they assumed were being performed by Omnipotence—an explanation not altogether reassuring. Then Berkeley denied the reality of matter. Hobbes denied the reality of the soul's substance. Baruch Spinoza [4] did away

[4] Baruch Spinoza (1632-1677), though not one of the lucid and simple among philosophers, was certainly one of the most candid and unassuming

with the whole concept of three substances by conceiving of God as the world, and of thought as well as extension as attributes of the one Divine world-substance. According to this notion, body and soul are one thing viewed from two different aspects. They are associated because they are the same. Such a solution would be perfectly satisfactory if the Cartesian premises were correct—if, in a word, substances fundamentally different could not enter into relations whereby they could effect a thoroughgoing interchange of energy. But precisely this questionable premiss was not viewed with suspicion by the Cartesians, and Spinoza also accepted it unhesitatingly.

This gifted and tubercular Jew abides as a symbol of the friendless isolation, the grandiose, sorrowful misery, in which so many modern philosophers have lived. His family pined in racial exile from the spiritual home in Palestine, from a later transient abode in Spain. Anathemas had been flung at his head by Jewish brethren. A stranger to all the common amenities of church and state, he found in-

of men. He was born in Amsterdam, Holland, to which city his parents, being Portuguese Jews, came seeking a refuge. After a fairly extensive education of the sort given to young men of his race,—it included something of the sciences as taught by a local free-thinker, and an introduction into Talmudic literature under the direction of the Rabbi Morteira,—Spinoza arrived at a philosophic position rightly considered heterodox by his Jewish brethren. He was solemnly cast out of the Amsterdam synagogue and obliged to seek refuge in small, out-of-the-way towns. In 1669, however, he removed to The Hague, where he earned a livelihood by polishing lenses and wrote his truly significant books. Some years later (1673) he was offered a professorship at the University of Heidelberg, but declined and continued in his humble station. He was poor and manifestly loved poverty, leaving behind him barely enough to cover the expenses of burial.

Spinoza's chief work is the *Ethica Ordine Geometrico Demonstrata,* the five parts of which treat of God, the nature and origin of the mind, the nature and origin of the emotions, human servitude, and human liberty. His other books include *De Intellectus Emendatione, Tractatus Politicus,* and *Short Treatise on God and Man* (written in Dutch). There are monographs by Pollock, Caird and Brunschvigg.

secure hospitality in Holland, and declined an invitation to teach at the University of Heidelberg. But his system was destined to become the basis of later romantic philosophical theories—of regal but inchoate cosmic poems written because of a thirst for truth in the midst of an anarchical civilization. Schelling and Goethe would appeal to his authority, and he would be the model of those eager to profess some modern version of *psychophysical parallelism.*

Mathematical Evidence

Spinoza's system advances claims which are peculiar already for the reason that we are asked to believe they have been established by mathematical evidence. Of course he was mistaken, and none of his disciples has accepted his method. He himself defended first the Cartesian system, and later on his own. In both cases he claimed to possess mathematical proof. Obviously only one of these systems could be demonstrated correct in such a fashion. Moreover Spinoza was not an inventive mathematician or a notable physicist, as Descartes had been.

Mathematics begins with axioms, which are applicable to its ideal elements but tell us nothing about cosmic reality. Spinoza's axioms, however, are *a priori* statements, very terse and rich in meaning, about the noblest and most perfect of realities. The objects with which mathematics is concerned are defined in advance as those things which correspond to the axioms. Therefore they cannot run counter to the axioms. As rules governing an ideal world and which have been determined upon in advance, the axioms are evident. Spinoza's principles, however, have been violently opposed. The very lucid and simple axioms of mathematics do not, moreover, cohere in a way which renders separation of them impossible: according to the way in which the mathematician chooses from among them he

can construct ideal worlds sharply differentiated one from the other. Experience must decide (and occasionally even it cannot decide) how far they may be employed in adjudging the real world. The extremely poetic and equivocal principles of Spinoza permit, however, of varying idealistic interpretations—without at all guaranteeing that any of these is similar to and comparable with cosmic reality.

In the second place, mathematics owes the minor propositions in its conclusions to the solution of problems through operations. The sum-total of its object is, therefore, constructed and verified step by step. Its operations are not logical exercises; they are procreative of objects. Spinoza's doctrine, however, merely borrowed the *logical form* of the Euclidian demonstration. He neither presented problems nor constructed objects; and so he necessarily borrowed the minor propositions of his proofs from observation. Even though such borrowing had proved successful, it would inevitably have plunged Spinoza into that *investigation of experience* which is always attended with the hazard of uncertainty. As a result his mathematical form of presentation was only an inadequate cloak. Indeed he frequently flung it aside at decisive moments and expressed "that which is really worth knowing" in freely worded comment. He was simply a victim of a fancy current in his age—an idea that mathematics should be taken as the model for science of every sort and incidentally for philosophic inquiry. Of course we grant that the possibility of developing a philosophy *more geometrico* remains a matter worth pondering, quite apart from Spinoza's system. Such a philosophy, however, would certainly have to respect the boundaries of ideal science, which are clearly indicated and cannot be traversed. Nor could it ignore that critical task of comparing ideology with reality which is the proper preparation for metaphysical reasoning.

Spinoza and Reason

Finally, the lack of common ground between Spinoza's method and mathematics is proved by his methodological treatise on the clarification of reason (called *De Intellectus Emendatione*), wherein traditional knowledge, accumulated observation and the logical manipulation of the two are seen as preliminary stages in deduction from metaphysical ideas. Now obviously mathematics, like all sciences, has a tradition; but logically arranged data supplied by observation do not figure in its operations, and it is powerless to complete deductive processes from axioms alone (that is, without recourse to individual ideative objects and to operations). The human intellect simply cannot derive all particular ideas out of generic universal ideas, regardless of ever so many appeals to logic. It can, however, safely constitute universal ideas out of particular ideas; and for this reason *its proper starting-place is always experience.* No mind without experience is able to divide the comprehensive universal idea of "the world" in a manner conformable with facts. True enough, this quixotic task has often been proposed by philosophers in recent centuries, but it has never been carried out with even relative success. If it could be performed, the method would, however, not be mathematical but magical—in the Neo-Platonic sense.

And at bottom Spinoza's heart yearned for this science of magic. He was not content with the gradual formulation of adequate concepts, which would signify with increasing accuracy the objects to which they corresponded; nor was he satisfied with attempts to base upon those concepts hypothetical conclusions about what remained unexplored. He simply believed himself the possessor of an intuition into the essential character of substance, and therefore naturally considered his definitions adequate descriptions of things.

Identifying as he did logical demonstration with insight into every form of dependency, including casual dependency, Spinoza inevitably exposed his declarations about universal dependencies to manifold interpretations.

Pantheism

Being a young philosophy anxious to begin without paying attention to antecedent thinking, Spinoza's system was, naturally enough, pantheistic. He himself may also be said to have acquired pantheistic tendencies by right of inheritance from Jewish Scholasticism which, in Spain, had come wholly under the influence of the Arabians and the Moors. Avicebron [5] spoke of God as *That which is essentially one*, in a Mohammedan sense. Moses Maimonides,[6] who had influenced Spinoza's teacher Morteira, established the Averroistic notion of the All-Divine as the goal of the prophetic ecstasy. Spinoza's fundamental definitions of truth all repose upon tangled premises, highly poetic judgments, which are Scholastic in origin. Taken out of their sequence and brought into arbitrarily arranged relationships, these premises and judgments mean something entirely different from what they originally did. These equivocations, of which there are so many, Spinoza explains according to his wish and his trend of thought at a particular time.

"That, the nature of which contains existence in itself is the first cause of itself" is a sentence in which Spinoza incorporates a Scholastic definition of God. He then proceeds to apply it to the world. "Substance is that which is in itself and is understood out of itself" is a similar sen-

[5] Avicebron, eleventh century thinker, wrote *Fountain of Life.*

[6] Moses Maimonides (1135-1204) was born in Spain and grew up to become the most learned and significant of Jewish Aristotelians. His *Guide of the Doubting,* combining philosophy with tenets of the Jewish faith, is still widely read.

tence also applied to the world. God, Spinoza goes on to declare, is the substance which possesses an infinite number of attributes; but an attribute is that which the intellect perceives in the substance as determining its essence, and so God becomes a synonym for world. The system thus established would gain clarity and lose nothing if the word "God" as used in it were everywhere replaced by the word "world." Even Spinoza's mysticism could subsist without the term "God."

The world (in Spinoza's view) exists as a thing necessary and unique because it is the substance of all attributes; and two worlds possessing the same attributes could not possibly be, for the reason that no two ideas have the same characteristics. For ideas are unique and cannot be doubled by thinking them twice. This reasoning would, we may note, be preposterous if it were not based on an exaggerated idea-realism. Spinoza nowhere makes the following statement, but it is really accepted by him as indubitable: "A true idea must correspond with its object; Spinoza thinks a true idea; and therefore Spinoza's idea is actually information about the world." As a result he knows the multiform finite *modi*[7] of the world-substance as these, limited by their counterparts, are born out of the world-substance in conformity with its two unique attributes—thought and extension—which are perceptible to human reason. Thus the three substances recognized by Descartes shrivel together into *attributes* of *one* substance which, defined as something that baffles investigation, is only to be admired in contemplation. In a manner which transcends time, all things proceed out of the natural, experiencing and extended

[7] Spinoza's finite modi, or modes, must be thought of as the endless fractions into which the divine substance is divided, as the countless waves which the sea of infinite being creates, which subsist a little while, and then disappear. Every mode has a thought aspect and an extension aspect: thus the idea of a triangle and the triangle itself make up one mode.

single substance just as "the sum of the angles is contained in the triangle."

If (as is quite conceivable) this remarkable view of Spinoza's were developed in accordance with genuine mathematical method, its limited effectiveness would become quite as apparent as are the limitations of man's ability to explore reality. Theoretically speaking, one might describe the visual images formed by an all-perceiving eye as three-dimensional, and then describe the physical world as a four-dimensional cosmic linear ornament. Having thus arrived at a "cosmic formula," one would be able to conclude from a cross-section made at random what every other cross-section would reveal. But one has only to state such problems to see how far their solution transcends human power. This solution, however, would reveal the fact that only those phenomena which are strictly governed by space and time (that is, those which are mechanically related) could be calculated backward and forward. Human experience, which is either independent of space or not wholly confined in space, would fit into the "adjunct" only partially. Dreams, history and the realization of purposes could be accounted for, perhaps, in retrospect, but they could not be predicted in advance. It is true enough, as Spinoza says, that threads from many a time-spool reel into the loom of space, entering into it and then losing themselves out again. But the more one reflects upon this best of all his notions, the more clearly does one see that his system is untenable. Its error is the assumption that the part of reality which the philosopher's idea resembles is commensurate with the cosmos. It makes no allowance for purposive causes, or for the freedom of the will. Spinoza (like the materialists) would compress being into one narrow room.

Parallelism

If (he continues) all experiences flow of necessity out of experiencing and extended nature; if one and the same world, conceived of now as experiencing and then as extended, is constantly one and the same substance; then our exploration of these things must reveal series of experiences and mechanical processes which exist *parallel* to one another with no points of contact. This reasoning Spinoza compresses into a formula: "Order and dependency in things is the same as order and dependency in ideas." None of his sentences is more frequently quoted and none is more iridescent with many meanings. Precisely *what* exists in parallel? The thing and the perception? The event and observation of the event? A property and a representation of that property? Matter and knowledge? Body and idea? Stimulus and sensation? Cerebral processes and experience? Spinoza gives no answer to these questions. Nevertheless his doctrine of parallelism enshrines an important problem from the point of view of criticism of knowledge. Let us see what this is.

Natural science describes physical events and is not concerned with psychical happenings; in psychology, the situation is exactly the reverse. Neither science can, therefore, be considered a complete explanation of the facts of life; and it remains the task of *philosophy* always to take into consideration both the object and the subject. And the more diligently one attempts to be a philosopher in this sense, the more clearly one discerns relationship between the two—relationships which Spinoza, as a Cartesian, simply overlooked. Besides, his notion of mechanical causality is relatively obscure, for unlike Descartes he had no talent for the investigation of nature. "Everything strives in so far as it is able," he says, "to abide in its being." Like

Hobbes, he places the instinct of self-preservation which exists in the living entity—its effort to maintain itself a self-purposive being—on a level with a mechanical cause or effect (one cannot tell which precisely).

Ethics

The ethical concepts which Spinoza derives from his idea of man are also suggestive of Hobbes. The soul is seen as struggling to obtain that which will benefit the body. All virtue is qualified by the endeavor to preserve oneself. That man acts in a virtuous manner who preserves his existence according to the guidance of reason, and seeks his own gain. In the state of nature every man would be the judge of what his own interest requires. But union and suppression have created states, on the basis of social contracts. Government is, however, intrinsically the ultimate cunning act of natural man intent upon self-preservation. Spinoza, accordingly, shares Hobbes' idea of the state and Machiavelli's political morality. From their teachings many characteristics of his doctrine of society are derived. Loyalty to treaty obligations Spinoza considers stupid, because a treaty is binding upon a state, according to correct international law, only in so far as its interests require. He announces with cynical frankness that where might is there right is also. Even tolerance, as Spinoza preaches it, is based upon the argument that nobody has power over thought. Unrestricted wilfulness is advocated in his ethics of private life: "That which harmonizes with our nature," he tells us, "is necessarily good." The good is useful, the evil is equivalent to the harmful. Whatever increases man's vitality makes him happy; whatever depresses it, causes suffering. It is always good to seek pleasure and avoid misery. Pity is, therefore, a useless vice, because it increases suffering. Humility is a mean vice, because it decreases vitality.

Contrition is not a virtue, because it cannot efface the deed accomplished and only renders one unhappy into the bargain. False virtues of this sort are useful only to curb the mob. Spinoza, it is obvious, confuses pity and the "bliss of tears"; humility and timidity; contrition and the "bad taste" engendered by a spree.

Mysticism

Like almost all heralds of a brutal and relentless ethics, Spinoza led a blameless life and earned his bread grinding lenses. Machiavelli lived in poverty as a minor official, and Nietzsche was a sensitive, very courteous professor. Spinoza's attitude of resignation was based, no doubt, on his noble though non-Christian mysticism, which one thinks of much more gladly than of his ethics. It is inevitable that most men should live, Spinoza thought, under the dominion of passion, but it is equally necessary that the mystic should escape from that dominion. Though destiny is the master of all, it is nevertheless freedom for the mystic. Spinoza, having denied freedom, immortality and God—whose name is merely affixed to his system—cannot conceive of the soul as an immortal spirit willingly seeking refuge in Divinity. He was constrained, therefore, to answer the question: How then shall the monistic mystic attain freedom from passion? His answer was: The mystic gazes tranquilly at the world he loves, accepting with the same impartial eye the figure of a triangle and the inevitable vices of the human race. The most important of the experiences (ideas) which he thinks is that of knowledge concerning his own soul, *which experiences itself.*

The soul which thinks itself is, according to Spinoza, an *idea* thought of as such by the world substance also. This idea of the soul is *contained* in the world, therefore, and merely recurs in the soul which reflects upon itself. With

such a soul, the body is coördinated. In the *impressions* which exist in parallel with the *occurrences* in the body, the soul knows not the body merely but itself—its joys and sorrows—as well. The emancipated thinker turns, however, toward the "world thought." Of this he himself, in body and soul, is a mode; and so his love returns to it without ceasing to be, in a certain sense, love of self.[8] Having gained knowledge of the universe, the thinker has likewise destroyed the power of passion to control him, because this knowledge is also pure affection, which saps the strength of impulse. Love for the All enters his soul, and the All does not permit of passion. Death does not trouble the emancipated man, for his wisdom consists in reflection upon the *life of the All.* He needs no other happiness. Having grown loving in the loftiest sense, he does not demand that the All love him in return. The spiritual affection with which the All Soul loves Itself is precisely that affection with which the human soul surrenders to it and thus to destiny. This, Spinoza's ultimate truth, the soul views with the insight of eternity: it knows this not through observation of actual contemporary existence, but through contemplation of nature in its essence. And having understood that it is in the All, the soul also knows that it is understood by the All.

Round about these dizzy pinnacles of thought there hovers the melancholy, moving mood of euphoria wounded by living and welcoming its own gradual, tranquil extinction. Tired and eager to surrender, self seeks to drown in the sea of an All Soul. Thus perennially do weary and unsatisfied souls, victimized by their dreams of dazzling power, long to abandon the struggle. Because nature carries on its

[8] It should be understood that Spinoza, conceiving of man as a mode of the world substance, denied the separate existence of the will. "Will and understanding," he said, "are one and the same."

appointed tasks calmly without respecting antagonistic human wills, a man whose reason has essayed a too ambitious attempt to master the world will always end by giving up the endeavor. In Spinoza's case, however, the talk was not of death but—as is so often the grewsome fate of repudiations of individuality—of the death of the soul. Through his words there ran only a faint whisper, dictated by an ineradicable longing for genuine peace, of the name of God.

3. Spiritualism: Gottfried Wilhelm Leibnitz

The critical realism of Aristotle, completed in the system of Aquinas, held to the golden mean between four views of the world which may be said to be relatively remote from actual cosmic circumstance: nominalistic Positivism and Platonic Idealism on the one hand, the materialism of Democritos and Spiritualism on the other hand. We shall see how the first of these gained its classic modern form in the doctrine of David Hume. The last was perfected by Leibnitz.[9] These two thinkers constitute the poles of mod-

[9] Gottfried Wilhelm Leibnitz (1646-1716) was a man of strikingly varied interests and great comprehensiveness of mind. Matriculating at the famous university in his native city at the age of fifteen, he followed an intensive course of study which was finally halted by his reception of the degree of Doctor of Laws. Soon he had embarked on a diplomatic career, representing the Elector of Mainz at the court of Louis XIV. After 1676 he lived at Hannover, where he held the offices of librarian and adviser to the court. Leibnitz was an exceptionally amiable, lofty and tolerant man. He could also devote himself fervently to philosophical study and to the cultivation of friendships with other distinguished men, being as he was in no want of leisure or of means. The zest with which his life was lived is reflected to a considerable extent in the optimistic character of his philosophy.

Those who delve into Leibnitz's complete works will find that he attempted no systematic exposition of his doctrine. His writings are, for the most part, essays dealing with problems which had engrossed his attention. Among these one may note *La monadologie, Disputatio Metaphysica de Principio Individui,* and *Essais de théodicée.* Far more attractive (and perhaps not less significant) are the files of his published correspondence.

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ern metaphysics, just as Democritos and Plato constituted the poles of antique metaphysics. Moreover, Leibnitz's doctrine may be considered the first thoroughgoing antithesis to Democritean teaching, just as Hume's theory is the first direct opposite to Platonic idealism. The great service rendered by Leibnitz lies, therefore, in his resistance to a materialism which had rapidly gained ground in his age. His limitations are largely explained by his spiritual environment, above which he towered but from which he never quite managed to separate himself.

Protestant Philosophy

Repudiation of Aristotle, the discovery of unknown parts of an earth that had been proved round, the victory of mathematics, the rise of nationalist states, international commerce—these were all great revolutionary movements, of which the Lutheran Reform was not the cause or the unifying force, but to which it was allied. Whatever the religious significance of Protestantism may have been, it bore no fruit in philosophy. Attempts to picture Hegel (who was a follower of Spinoza) as the "philosopher of the Protestant churches" are based upon a misunderstanding of what Protestantism—at least in its primitive forms—really was. Luther himself denounced the "academic nonsense of the monks" in violent phrases, until Melanchthon [10] appeared with his summary maxim, *monumentis Aristotelis carere non possumus.*[11] Melanchthon himself was a compe-

Here is revealed the "universality" of his genius and his heart. A good contemporary introductory essay to the whole meaning of Leibnitz was contributed by P. Wust to *Hochland,* for March, 1925. There are several valuable books of comment, including Merz's *Leibnitz* and B. Russell's *Critical Exposition of the Philosophy of Leibnitz.*

[10] Melanchthon (1497-1560), one of the first Protestant reformers, developed and upheld a kind of Protestant Aristotelianism.

[11] "We cannot get on without the works of Aristotle."

tent philologist but not a creative thinker. He and his associates got no farther than a symposium of doctrine which may not unfairly be termed a kind of humanistic herbarium. It was hardly affected by the life-giving mystical current of Quietism [12] which, however, carried strange jetsam of its own. This current was, as a matter of fact, repudiated by prominent Protestant theologians (Ritschl,[13] for instance) as being a relapse into Catholic habits of thought, and it was always at odds with orthodoxy.

It was the fate of Lutheranism to share with all manifestations of the modern soul first, subjectivity of conscience, and second, a dualism of exaggerated "inwardness." This dualism made religion an affair of sentiment and turned the newly discovered world and its commerce over to its own government. The kingdom of the pious soul and the kingdom of the outer world were seen to exist as two realms between which there was no connection. Even the Franciscan way of dealing with nature as a luminous manuscript was thus forbidden. Matter was apportioned to its own blind laws, to technical science, to unscrupulous commerce and exploitation, because it was considered something cold and strange which lay outside the sphere of pious thought and feeling. Religion, therefore, was compressed into its inner realm, and even this was narrowed greatly as time went on. The believing soul, hemmed in by its mood, became more and more indifferent to outside affairs. This emprisoned "inwardness," this supremacy of sentiment, begot Spiritualism.

[12] Quietism, a practice of passive mystical contemplation, was a movement which took its rise with Miguel de Molinos (1640-1697), a Spanish priest living in Rome. His *Spiritual Guide* had an extraordinary influence over a multitude of souls, but was declared heretical as a result of Jesuit opposition to it. Molinos was condemned to life imprisonment.

[13] Albrecht Ritschl (1822-1889) was a German Lutheran theologian.

The German Renaissance

The wars of religion, which hampered French philosophical development, also weakened the creative thought of Germany. What is termed the "German Renaissance" was a mediocre imitation of Italian and other models. Its poetry was satirical or polemical, artificial or humanistic. Hymnody only, which fashioned many settings for religious feeling, was really honest in inspiration. It was the refuge of mystics seeking to express in newer diction an old literary treasure. Gerhard [14] translated the Bernardine *Salve caput.* In prose the problem of Faust was studied until Germany had been given its folk-lore about the great "black magician." With the skill of genius, Grimmelshausen [15] combined wild naturalism and pious wisdom. The poetic Angelus Silesius [16] took his way back to Catholic belief by the road of mysticism. Pastoral literature remained purely conventional. Opitz dedicated a dull grammar to classicism.[17] What there was of drama clung for the most part to the externals of Shakespeare.

Leibnitz

Great gifts belonged unmistakably to Jakob Boehme,[18]

[14] Paul Gerhard (1607-1676), Lutheran poet and preacher, termed by Eichendorff the hymnodist who expressed most deeply and simply the emotions proper to the Lutheran religious hymn.

[15] Grimmelshausen, the author of *Simplicissimus,* was a seventeenth-century novelist.

[16] Angelus Silesius (1624-1667), the poetic name of Johann Scheffler, was a mystical poet and a convert to Catholicism. His *Cherubic Pilgrim* contains the best of his work.

[17] Martin Opitz (1597-1639) was a kind of German Boileau.

[18] Jakob Boehme (1575-1624) is to a considerable extent a German counterpart of John Bunyan. Born in the little town of Altseidenberg, he received no education and never learned to know any books of importance excepting the Bible. Boehme is called the "cobbler of Görlitz" because he earned his living mending shoes. As a thinker he concerned himself chiefly

the shoemaker, who rose superior to the extravagances of Neo-Pythagorean number-symbolism and Paracelsian occultism, but in whose works an underlying Gnostic meaning is veiled by cryptic and unreadable diction. He was beyond doubt the brightest figure in the foggy environment out of which Leibnitz came like a herald of light and warmth. Gottfried Wilhelm Leibnitz's numerous labors were creative in character and beneficent in influence. We properly speak of him as a seeker after truth whose courage was dauntless, as a worker on behalf of whatever enterprises were important to the cultural life of Europe in his time, and as a man whose noble genius matured into universality of mind and heart. A discerning jurist, who was also a master of organization and an honest diplomat, Leibnitz probably never wrote a book academically correct and outfitted with all the apparatus of higher learning. Be that as it may, the jealous belittlers and puny critics who attacked his work on the ground of its unconventional form—even as their kind always attack great achievement—have long since been silenced. The charm of Leibnitz's style, which is original and yet humble in the desire to serve truth, has been acclaimed by all who have an ear for what is immortally valuable. If the reconstruction of intellectual points of view grown disparate into a unified body of convictions could have been accomplished by a human being almost abnormally gifted, Leibnitz would have performed the titanic task.

Leibnitz's principle of toleration, which is exemplified so well in his correspondence with Bossuet, was to a large

with the problem of evil, assuming a Divine "eternal dualism" as explanatory of good and evil, and teaching "seven primordial qualities" in God, three of which represent anger and three love. On this basis Boehme established his explanation of the universe, the fall of man, and the sin of the angels. The earnestness and simplicity of his writings have made him particularly attractive to literary men.

extent his point of departure. In opposition to negative religious criticism, and in still greater opposition to the negative philosophy of the "age of enlightenment," he defended this basic conviction: There is far more of futile error in the various gainsaying and mutually disavowing judgments incorporated in metaphysical systems than there is in the positive assertions made in these several systems. And if to these judgments one added those negations which are the result of language, one might, then, measure the value of philosophic systems *according to the disavowals without which they could not arrive at the conclusions they establish.* For even such sentences as "All reality is matter in motion" contain negations.

This resolve to effect a philosophic synthesis was fostered by the magnanimous temperament of Leibnitz. Though he was one of the most inventive of all thinkers, he despised no stimulating contact with others. In contradistinction to the rest of his time, he had a loving understanding of historical philosophic tradition. At the age of fifteen he had familiarized himself with the thought of antiquity and of the Scholastic era, and this knowledge proved fruitful. Either through correspondence or personal visits he then formed ties with almost all the philosophers of his time. Nevertheless he made no idea his own until he had thought it through personally. He alone among the great Cartesians was himself a creative mathematician and physicist, rivaling in these respects Descartes and Newton. The problem of substances, which Descartes had not solved, fascinated Leibnitz almost as if it were a thing of his own flesh and blood. He took Bruno's speculation about monads out of the fog of phantasmagory. The mystical doctrine which Dionysius the Areopagite had formulated served him as the spire of his widely extended theory of the cosmos. Finally, his brain was too sound to permit his tumbling into that wrathful

contempt for Aristotle to which so many of his contemporaries had descended.

Synthesis

Having established his thinking on this broad foundation, Leibnitz could recover that reasonable, normal relationship which the mind of antiquity had maintained toward the actuality of cosmic being, without sacrificing those gains of knowledge about personality which the modern mind had achieved with so much effort. Just as the attention of antiquity had been riveted upon the universal judgment, so Leibnitz was struck by the *absolute uniqueness of each real thing and of each real occurrence*—a uniqueness which does not, however (he saw), impair universal order. *Individuality* and *continuity* are the central motions of his philosophy. He divined how necessarily finite thinking is obliged first of all to abandon the hope of comprehending reality worth knowing down to its finest detail, and secondly to content itself with constantly more accurate approximate knowledge. Precisely because he had tested the ideatively constructive tendencies of modern reflection and nature-study and knew their strength as well as their weakness, his eye was able to discern that uncorrupted reality which, being the work of God, is everywhere thoroughly unique.

He began by giving mathematics a previously unsuspected elasticity and flexibility in calculating complicated figures and movements. Instead of sowing a curve with an arbitrary number of points and surrendering, through rigid contemplation of the boundary marks, the continuity of the figure as a whole,—as Zeno of Elea had done,—Leibnitz divided the curve into a convenient but adequate number of small constituent parts out of the smallest of which one could then still discern the individual character of the form of the whole. Being smaller than the smallest part that is

ever encountered during the course of any possible division, the "infinitesimal" approximates to "that which is infinitely small" without succumbing to the paradox involved in this term. It also permits of all such inattentiveness as is essentially purposive simplification without ever destroying the accuracy of the calculation, because accuracy itself is always to be conceived of as something relative and approximate. Thus the continuous orbits of moving bodies could be determined through infinitesimal calculation in a new manner, and physics as well as astronomy profited by a new and unusually fruitful conception.

The Unique

This "smallest constituent part of reality," adapted to continuity, was then also the object to which Leibnitz devoted his philosophical speculation. He had solved Zeno's paradoxes of movement. But if every infinitesimal is already an ideative and unique individuality, which determines the entire form of the ideate which is based upon it, then the fundamental constituent parts of *reality* must also be absolutely unique and not-to-be-repeated, and yet arranged in a world-system in which none of them claims a place that is not in complete harmony with the places occupied by its peers. It follows (said Leibnitz) that every real individuality would probably enable the investigator to see the whole world in it, provided he could fully divine its character. Necessarily the task of the logician is to find everywhere prevailing *similarities* of form, no matter how great individual *differentiations* may be. On the basis of these similarities he can, if he summons his whole art to bear upon the problem, construct a plethora of conceivable ideal worlds correctly and in conformity with rule. But even if he did this, it would not mean that *all* these conceivable worlds would become real: in fact, the *only* real world is

that which is the most perfect possible world, and which therefore (by reason of its perfection) cannot be exhausted by speculation. Only that which is capable of existing in this created and perfect world is at once unifiable with matter and capable of realization—"compossible," in Leibnitz's language. That which can be thought of must, therefore, first be compared with what is consistent with it in reality. For a long time Leibnitz busied himself with the idea of formulating, as a basis for computing cosmic possibilities, a strictly constructive science of qualities—a *characteristica universalis*—the terminology of which was to be worked out according to the model of mathematics and would be a kind of Esperanto of investigation. Modern students ought to find it worth while taking up this promising idea.

Once the study of nature from the standpoint of causality has revealed what is pertinent in those portions of ideatively constructed theories of the world which are compatible with one another, a realm of eternal truths can be built upon the foundation of factual truths. Our thoughts, able to rise above the sum-total of verified observation, hope to mirror the real world accurately, for the reason that we ourselves are also unique individuals who bear the whole world in ourselves—a world full of purposive ideas and purposive effects. But in order that we may describe the utterly indescribable wealth of phenomena in a way that is universally correct, it is necessary to grant, during the first stage of our interpretation, the existence of a system of effective energies. Viewed from the outside, says Leibnitz, source-points of energy, to be conceived of as being as minute as our thought will permit, are the unique substances of cosmic reality. Here he anticipated the modern theory of electrons—a theory which, however, revealed its full significance only when the form of the electron-paths was seen as helping

to explain the unique character of elemental substance.[19] Leibnitz, however, was not content with essaying merely a physics of energy. His "source-points of energy" are individualized *from within* by individual quality; and this can only be the case if they are essentially individuals—*monads*, not atoms.

Macrocosm and Microcosm

Thus Leibnitz began a magnificent poem about the world, the impressiveness of which really bears comparison with antiquity. The *macrocosm* is a kingdom to which all souls belong, and each soul contains *microcosmically* the fulness of the whole world. This having been granted, wherein do the characteristic differences between monads lie? They are not all awake, says Leibnitz. They are not all equally bright with the light of consciousness. What in some is developed into active reality, exists only as potency in others; and the second group show themselves passive and less conscious. Consequently there must be one monad which does not sleep or remain passive, a monad in which everything is essentially *act*. Now primal act is creative of the universe, is productive of energy, is in control of the directions in which energy shall be applied, is that which designates purposes. The primal monad is, therefore, God.

In the lowest monads nothing is awake; they are designed for passive eventualities. These powerless monads are material and are enmeshed in mechanical occurrences. Without being awake to the extent of standing on the threshold of consciousness, the plant forms of life do manifest a conduct that suggests soul. They are excitable and even, in a sense, aspiring. In the animals, feeling and passion slumber. The monads of their bodies are closely associated with their entelechies—their central monads, the animal souls. Division

[19] Substance, in his definition, is self-activity.

of the higher plants can be made so that the result will be a larger number of plants, but in the case of even very simply organized animals such division would mean death. The animal, however, does not live in the light of eternity. It is conscious of itself only by reason of the instincts and feelings of its body. It is never reflective, or reflective about itself.

Man is the first creature to say "I" to himself. He is not only a "little world," but he knows that he is a little world. He is able to discern eternal truths, to govern himself according to nobler things than facts. The hegemony of the reason and the urge of the passions are balanced within him. He owes his wisdom to sensory observation as well as to thought. He can calculate events in advance, postulate effects, establish purposes and realize them in a measure conformable with the limitations of his nature. Loftier created spirits than he find the world less opaque. To them is revealed the hierarchy of spirits existing behind the evident "appearance" of space; and they see, beyond the roar of the time-stream, the development of the world to greater from lesser clarity. The principle of continuity obliges us to abandon the arrogance of natural science, which would term man the highest creature, and to recognize the reality of the angelic choirs circling round the throne of the Most High even as we recognize that the cosmic mechanism is obedient to the purposes He has established.

Analogies

In his reflective manner Leibnitz, resembling the thinkers of antiquity, developed two vast poetic analogies—analogies in which one can discern the mystery of his manner of regarding the world. Wandering about the park with the ladies attendant upon the Princess of Hanover, he asked them to find leaves one of which might be taken for the other.

They were unable to find even two. In this world no thing resembles another as one egg does another:—indeed, no egg even is absolutely like another egg. Our concepts are not doubled if we think them twice; and in the realm of actuality no two things are absolute duplicates. Why is this so? *Because we contain the world within ourselves, and our thoughts faithfully mean the world.* And when we form a picture of reality within ourselves, we are not kneading wax according to our whims. We are, rather, like the wood-carver who owes to the grain of the wood part of the execution of his work. Not each and every kind of picture can be carved from a given block. Similarly, guiding lines are inlaid into our thinking and willing, and we cannot disregard them with impunity. No fully formulated judgments are ours from birth. But there is ingrained in us the *potentiality of true knowledge;* we carry the world within our souls. In us there resounds again the thunder of seething spheres, even though being finite mortals we cannot distinguish the roar of every drop of water therein. Every drop does, however, arouse unconscious happenings, all of which merge in the harmony of the lofty outcry of the universal sea.

The soul is substance, and it thinks itself in the notion of substance. Because it is a unit and is at the same time simple, it creates a unified world synthetically, out of a thousand fragments. It thinks what it itself is. We fashion the world because the world is fashioned within us. Therefore our sequences of reasoning do apply again and again to reality; therefore no real object exists to which contradictory notions apply; therefore a reasoned judgment describes the dependence of real events one upon the other. We divide concepts according to kinds and categories, and real things are ordered in the same way. We encounter the bodies posited by stereometry, inventions of our own, out-

side upon the earth. The concordances which we recognize in thinking can also be discovered through observation. A creature which merely discerns certain fractions of the sense perception is nevertheless able to think the whole. The proofs of the geometrician do not demand illustrations from experience to render them correct. Therefore knowledge and reality are in complete harmony—a fact which can be explained only by conceiving of it as an ordinance of God.

Criticism of Leibnitz

Almost everything that Leibnitz says regarding the soul and its world-wide kingdom remains perennially significant. Having discovered the soul's "unconscious night," he revealed to it, through the principle of continuity, the truth that the shadowless light of Divinity is the worthy goal of knowledge and the cause of cosmic harmony. The value of his philosophy lies, therefore, primarily in the fact that as a view of the world it counterbalances materialism. Nevertheless Leibnitz's denial of matter is quite as untenable as the materialist's denial of the soul. There is no basis for a spiritualistic physics. The interplay of energies cannot be termed a psychical occurrence any more than experience can be explained as "cerebral movement." The opinion that mass, when fully understood, is spiritual in character, cannot be proved right or rendered more acceptable by repetition. It should be noted that the reality of matter was denied in Leibnitz's philosophy because interchange of activity between body and soul was regarded as *a priori* impossible. This one-sided Cartesian assumption imposed certain one-sided conclusions upon Leibnitz. His declaration that the monads "have no windows" is the toll he paid for the eminently modern habit of isolation. Because matter is considered absent from his imaginative kingdom of souls, this is taken to know no misery caused by mechanistic

evil—no painful gulf between the ideal and the paltry reality. The metaphysical tare of original sin has no place in Leibnitz's doctrine, for this does not force an earnest choice between God and the world upon the soul. As a result this world is seen all too pleasantly as the best of all possible worlds, as an uncorrupted paradise. For Leibnitz misery and pain are merely *dearth* in finite monads. The terrible, serious existence of material need, of real suffering and of the world-destroying power of sin, is erased from a picture far too harmonious in outline and detail. Leibnitz's universe is a new Jerusalem rather than our earth. We hold rather that not a spiritual world only can be so created that during the course of its activity all active causes serve the vast purposes of God; a material universe may also be so ordered. This was made clear by Leibnitz's great opponent, Isaac Newton.

4. Epilogue: The Metaphysics of Isaac Newton [20]

It is not altogether surprising that youthful natural science, busy with diverse investigations, forgot to look toward the purposeful Creator of the cosmic machine which rumbles on obedient to the laws of mechanical, causal necessity. As a result speculation, so much concerned with things as they are, discarded the notion of teleological causality. Leibnitz was great and temperate enough to observe that the directions taken by mechanical energies are indefinite and can be controlled by man determined to achieve a desired effect. A machine capable of motion can, with

[20] Sir Isaac Newton (1642-1727), whose discovery of the law and theory of gravitation was so important because it proved that the universe as a whole, so far as we can know it, is governed by the same laws as those which apply to the earth. His most important doctrines are set forth in *Philosophiae Naturalis Principia Mathematica.* Newton's proof for the existence of God is outlined chiefly in his Letters to Doctor Bentley, included (as are also his comments on the Apocalypse) in his complete works.

the same expenditure of energy, reach a number of very different goals, none of which is derivative from its character as a machine. It is merely a mechanism usable for a purpose. The world as a totality—irrespective of how many mechanical processes it contains—likewise permits of God's every purposive intervention. If substance be innately spiritual (said Leibnitz), then all effects accomplish the purposes which are primary in some desire, but the world as a whole is guided according to the final purposes of God.

Newton's Originality

This lofty view is the essence of Leibnitz's theodicy. His great compeer and therefore also his great opponent, Isaac Newton, pursued the same trend of thought in his own manner. It is curious how often the original ideas of mankind appear simultaneously in two places, as if to ensure their preservation. Independently of Leibnitz, Newton arrived at his own theory of the infinitesimal. In the law of gravity his genius discovered the simplest description of manifold movements of mass through the application of a very simple formula of measurement. He gave up trying to explain these movements by means of impact and pressure—an explanation many considered indispensable but which did not account for immobility. Newton's correct and pertinent descriptive formula explains everything about the phenomena to which it applies. He could therefore dispense with the hypothesis of ether-eddies which had appealed to both Descartes and Leibnitz. In general he was a more cautious thinker than his German compeer. It would never have occurred to him to attribute a soul to mass, unless he had seen that the description of highly organized and coordinated facts was aided thereby. He simply termed the world in which gravity reigns a mechanism. The more simply a machine operates and the less it needs repair, the

more nearly perfect it is. Our world of stars, in so far as it obeys the law of gravity, may be compared to a machine.

Even so this machine is a marvellous creation. And the more accurately a creative investigator of nature comes to know it, the more fulsomely will he admire and revere—not the mechanism, the universe, but its Creator. For there is no machine that was not brought into being by some intelligent maker, whose purpose it serves. This is true even in the case of man-made, limited, greatly patched mechanisms. The cosmic mechanism, therefore, must be understood as the creation of Omniscience. Later on Kant contended that this proof of the existence of God, as employed by Newton, did not establish more that the existence of a World-Designer. Newton would probably have replied that One who possessed sufficient intelligence to design the world must also possess the power to create it. Nevertheless the objection does make clear that an unbiased philosophical consideration of mechanical causality leads toward God, but that it is not sufficient to weigh merely *one* form of universal dependency. In this matter Leibnitz's insight was deeper, Newton's more precise. Taken together and compared, both are effective when brought into harmony with the Scholastic idea of God. It may also be noted that Newton, who calmly calculated stellar courses and falling masses, was a reverent reader of the Apocalypse; Leibnitz was the founder of a new theodicy. Both were scientists and mathematicians of the first order, but neither was a naturalist.

CHAPTER IV

NEGATIVE PHILOSOPHY AND THE AGE OF ENLIGHTENMENT [1]

1. Locke and the New Psychology

Leibnitz made clear how unfruitful an industrious application of reason for the sake of merely negative doctrine or criticism is when not coördinated with creative thinking. The phantasmagoric Renaissance philosophy of nature had grown out of just such a negative criticism of traditional Christian wisdom. The great modern schools of thought, on the other hand, owe not a little of their value as exponents of truth to that heritage of metaphysics which the generation of Descartes absorbed with the atmosphere of their youth. New generations which no longer knew anything of the past followed, however; and anxious as they were to discover everything afresh, through their own power, they faced a task for which they were necessarily inadequate. Strength and substance were wasted; no philosophical advance was made. Universal truth fell, the original individual idea rose, on the exchange. An incipient anarchy of world-views began to harry mankind, and a boundless lack of confidence in the value of the search for truth became prevalent. Philosophers earnestly doubted not only the existence of the soul, but even the reality of reason—which the great exponents of the Renaissance and classicism had lauded so enthusiastically. Critics of knowledge grew more

[1] Note: The reader may consult: J. G. Hibben's *Philosophy of the Enlightenment;* and L. Stephen's *English Thought in the Eighteenth Century.*

and more skeptical. Nevertheless culture trusted to a greater and greater extent the one-sided rule of reason. For how could one criticize reason unless one happened to be a somebody possessing reason?

Thus the doctrines of humanitarianism, naturalism and rationalism entered a new phase. Neither symbolistic magic nor pastoral poetry was now considered rational. Attention was directed rather to the scientific advance registered by the newest state of research. Truth was always simply the latest fashionable theory. Whatever great men had thought prior to the "modern" time was held to be of no account. It was actually believed that all the centuries had lived in the shadow of foolish error until suddenly the up-to-date thinker appeared with pure truth under his arm. Of course only propagandists of the third rank could really hold such views with any seriousness—the masters of a rhetoric which overcomes opposition with noise.

Honest philosophic habits could not be developed under such conditions. The principle which dominated all shades of thinking was a very shallow materialism of the Epicurean sort. Those who made this principle modish did not realize how frequently their empty concepts of the universe had characterized epochs of philosophical weakness. Their banal confidence in the senses premissed their assumption that the world was a thing that could be taken into one's hands. As a consequence genuine speculation became, as it were, an enterprise that could only be carried on against the grain of the time; and it was really physics which, poorly understood and misapplied, made war upon all philosophies but especially upon that traditional philosophy which had to some extent been identified with Christianity.

On the other hand, the positive teachings of certain thinkers of the Age of Enlightenment tempered harsh customs associated with morals and law. The amiableness of

a mild Epicureanism was appealingly revealed in these doctrines. They aided the task of refining European manners, which was also the life-work of Christian thinkers interested in giving currency to lofty Christian concepts of human rights and duties. But the majority of the "enlighteners" were of a different temper. Their renowned tolerance did not extend, for the most part, to Christianity.

John Locke

The father of this movement, John Locke,[2] was a genial thinker of great personal nobility. Nevertheless his intellect was really only mediocre and his work proved that the finest achievements in the realm of ethical thinking are beyond the scope of rationalism. Locke introduced the agreeable conversational tone of what has been termed the "philosophy of the salons." His was the shy temperament of the critic of knowledge. With characteristically English carefulness he posited a representative modern question: "What is the value of thought as an instrument for gaining knowledge?" He believed this query could be answered by explaining how knowledge comes to be. The question was (to his mind), therefore, to be settled by psychology. And so the English Age of Enlightenment—which is also the original Age of Enlightenment—earned the distinction of having arrived, by this circuitous route, at establishing modern psychology as a separate science.

[2] John Locke (1632-1704), author of the epoch-making *Essay concerning Human Understanding,* was born near Bristol, England, was educated at Oxford, entered the household of Lord Ashley (later the Earl of Shaftesbury) as secretary, tutor and physician, removed to Holland after the death of his patron, and returned to England as one of the company accompanying William of Orange. The influence of Descartes is noticeable in his work. His other books include *Thoughts concerning Education* and *Two Treatises on Government.* See A. C. Fraser's *Locke* and T. E. Simmons' *Genial John Locke.*

The New Psychology

This new psychology, naturally enough, discovered only the most obvious contents of experience: sensation and representation. It was Neo-Sophist in the sense that it saw in these two the only spiritual data that were evident beyond the possibility of any reasonable doubt. Bright and hot, sound and perfume, were facts plain to all; substances were not. Today we may agree that substances in themselves are not red or green; but we also know that the isolated element of pure color is likewise not an immediately simple fact, but rather an ideal object created by a highly intense abstraction. But in general the idea that the world of perception is constituted of sensory elements—something like the tinted fragments seen through a kaleidoscope—has been maintained throughout modern philosophy since Locke's time as an unchallenged assumption. It is the old ideative theory of subjective atomism, and the historian of philosophy meets it over and over again. This unrestrained simplification of the world (quite like the atomic hypothesis of an older day) is presented as if it were a fact of common observation. Upon it have been based theories of truth which have remained persuasive and popular long after the Age of Enlightenment.

Locke taught that truth is *thought* of a *sensation* through its image in *representation.* He conceived of sensations as the primal facts of *observation,* and of representations as the primal facts of *self-observation.* His psychology then set out to constitute all other experiences out of these elements. Thoughts as psychical entities having their own character could not, it held, exist.[3] But if there is no

[3] Locke made war on "innate" ideas and judgments in a manner that rendered victory easy. He was of course quite correct in refusing to believe that there are completed judgments which men find ready-made in themselves; but only the most surfacy kind of Platonism has ever be-

thought, observation is equivalent to attention; to know is merely to recognize something encountered previously; and error is nothing more than psychic blindness. In order to escape conclusions so untenable as these, modern psychology was obliged to analyze and differentiate. The eighteenth century theories of knowledge accepted them because it had forgotten the common-sense views of philosophic tradition.

The opening Age of Enlightenment was content to derive its picture of the world out of a bare handful of elements. First (it was held) man acquires sensations, and then their images—the representations of memory. Every sense furnishes sensations which we cannot ascribe to *things* as their properties, for the reason that they are really only *secondary qualities.* Through a combination of two or more senses, primarily through sight associated with touch, we gain experience of the *primary qualities* of things, such as shape and thickness, movement and rest. From the source of sensation and representation, there issue simple experiences such as pleasure and pain. The will is a representation of self-experience. And just as we ascribe primary properties to the substances of things, so also do we ascribe experiences to a substantial soul.

The Law of Association

When we compare our simple and (frequently) unchanging representations with the multiformity and mobility of sensation, we form *concepts* like existence, unity, energy and sequence. In other words, we build up complex representations out of simple experience-contents. The passing of our representations arouses the representation of *time;* the manifold associations between sensations arouses

lieved there were such ideas. But he took no notice of the deeper view according to which experience vitalizes basic human adaptation to basic judgments, provided an earnest effort is made to think and observe. Leibnitz found it easy to point out this hiatus in Locke's reasoning.

the representation of *space.* Our most comprehensive assertions, however, are based upon the division of objects into substances, modes and relations.[4] These *universal representations* are arrived at only (says Locke's philosophy) because they can be summoned out of memory independently of sensations, and can then be combined into new associations with one another. A sensation, reappearing, not only calls up the representation which faithfully images it, but other representations as well which are close to it in time and space, or which resemble it, according to the *laws of the association of representations.*

Though this psychology is simple and appeals to beginners in the study of thinking, it is nevertheless relatively chaotic. A joy which *belongs to me* is not to be compared with a visible representation of something *apart from me;* an act of the will is not an experience-content but a function which cannot be deduced out of any such thing as experience. Comparisons and classifications are acts which do not resemble any cinema-like unreeling of representations. These representations are also not at all universal, although universal ideas may be based upon them. Finally, logical coördinations are not associative in character.

We may say, therefore, that Locke rendered an important service by drawing attention to the most obvious of the contents of consciousness, and by setting forth the most immediate principles governing these. Psychology has been so appreciative of its obligation to him that many psychologists

[4] Locke's conception of the "complex idea" of substance is that which upholds or supports the qualities of things. His "modes" are "complex ideas which, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependencies on or affections of substances." A simple mode is a variation of a simple idea; a mixed mode is a blend of diverse simple ideas. His "relations" are little more than juxtapositions of ideas; and he termed causality a relation, thus differing with previous philosophy, which had thought of causality as a category.

still think of their subject in Locke's terms, while others even accept his theory of knowledge. Bearing this theory in mind, we ourselves may well consider an important problem raised by it. Is it correct to conclude that experience testifies to the existence of an experiencing soul, and is it correct to ascribe to the things of the outer world the primary qualities of shape and solidity? Now according to Locke's view we do not, of course, sense substances themselves; we sense only repeated and slightly altered "neighborhoods" of sensations. Similarities of perception, found to exist again and again, we *attribute* to identical substances; and we also say that coexistent, constantly reëxperienced series of experiences are governed by the rules of exchange of energy—are without exception strictly governed by the law of mechanical causality. Observation merely reveals facts to us, and our comparative investigation and mathematical measuring of these facts reveals certain repetitions. Substance itself remains unknown to us. But it is good practice to recognize its existence, nor do we make any improbable assumption in doing so.

We know as much as we need to. We can carry on commerce; we can live commendably in a democratic state having agreeable customs. We tolerate differing views of the world; we hope that Christian faith and modern reason will not contradict each other; but we do not grind our lives away worrying about the matter. We forego Revelation until we discover that it harmonizes nicely with enlightened rationalism. Thus Locke, the father of the Enlightenment, was temperate in his opinions.[5] His disciples, however, soon became more belligerent. He himself, having stated the problem of knowledge so imperfectly and vaguely, lives on in the history of thought chiefly because of his in-

[5] This portion of Locke's teaching is set forth in his *The Reasonableness of Christianity as delivered in Scripture.*

fluence upon two highly endowed philosophers. He is the predecessor of Hume and Kant, round whose doctrines a fierce battle was to ensue.

2. Bishop Berkeley and the Deists

Locke's denial of the possibility of knowing bodily substance impelled Bishop Berkeley (whom we have discussed previously) [6] to deny completely the existence of substance. His critical arguments often savor of his epoch; but his sensitive psychology was vastly superior to the commonplaces of Locke. Even Berkeley's researches in connection with special problems are of permanent value. He discovered, quite independently of Leonardo da Vinci, how the movements of the eye are a factor in the visualization of depth, and how the colors proper to the atmosphere affect the impression of perspective. What is actually experienced when representations held in reserve coalesce with new sensations —the completely realized picture of perception—he understood better than Locke did.

Nevertheless he was hampered by strictures of thought peculiarly his own. Berkeley taught that since abstract ideas are not to be found among intuitively evident representations, they do not exist. An abstract idea of a triangle (he held) would have to be both acutely angular and obtusely angular at the same time—which is obviously a contradiction in terms. Therefore one ought to replace the motion of abstract idea with that of a *representation representative of all*, in which case an appropriate triangle would typify all which shared many properties with it. Here one encounters the remarkable belief that the *idea* of a triangle must have three angles, that the *idea* of a stream must be flowing! A cool stream is blue and it flows; but a

[6] See page 304.

visual representation of it is obviously not cool, nor is an *idea* of "stream" either blue or cool. This idea merely indicates something flowing-cool-blue. The notion of a triangle is not acutely angular or outfitted with corners any more than the formula x=y is flat. Nevertheless there is a well-known mathematical formula which describes *a* triangular surface and also *all* triangular surfaces.

Psychologically speaking it is equally incorrect to say that a cherry consists of sensations of red, round and sweet. This cherry is perceived as something "there" and not as "mine." Sensory atomism of every sort can describe the experience of perception only very superficially. The theory of typical representation-ideas, as formulated by Berkeley, mistakes the *visualizable basis of some ideas* for the *nature of all ideas.* And so the hypotheses of the Age of Enlightenment, which fashioned pictures of the world out of a few elements arbitrarily selected, were as far estranged from reality as the Sophistic notions of antiquity.

Human Nature Undefiled

The real world evaporated into mist, and reason's task was restricted more and more. These eventualities blended easily with the amiable Epicureanism which came to be prevalent in the time of Locke and Berkeley. It seemed plausible to many cultivated spirits to conceive of human nature as uncorrupted and essentially good. Cumberland [7] believed that ethical relations between men are governed not by crude battling for existence but by benevolent inclination. Lord Shaftesbury [8] taught that an infallible good

[7] Richard Cumberland (1631-1718) was an English prelate and moral philosopher.

[8] Anthony Ashley Cooper Shaftesbury (1671-1713) was the author of *Characteristicks of Men, Manners, Opinions and Times.* He conceived of men as being governed morally by two sets of impulses: selfish impulses, which derive from the instinct of self-preservation, and social impulses,

taste would lead the mature and emancipated person to act justly and beautifully . . . and as a result he won the hearts of the classical German poets. The attractive and exquisitely cultivated man became the model, after the manner of antiquity. Virtue was considered the cause and the business of happiness. Surrounded by an atmosphere of freedom, the "gentleman" would grow into a beautiful man, noble by reason of his tastes, independent of the lash of duty. Lord Chesterfield,[9] eminently rich and cultured, urged his friends to be not tired æsthetes but men of energetic will—will, that is, which was not the carping puritanical virtue of the ordinary Briton, but a magnanimous power redolent of Platonic enthusiasm. Every human being (he added) carries his law in his breast. Serfdom under authority is degrading.

No doubt it is possible to ennoble life according to this recipe when the premiss is a charming English country home and all the instruments of culture are at one's disposal. But does the recipe suffice to lift mankind above its misery? Moral taste is a specialty reserved for polite society. There, surrounded by statues rescued from the ruins of antique civilization, one can find time to wear the masques of antique drama. Hutcheson[10] therefore defined the resolve of conscience as an act of acceding to one's sympathetic impulses. To him and his group virtue became an easy and agreeable way of using up an empty hour. Naturally enough, contemporary preachers of uncompromising uprightness had

which derive from the instinct to promote the species. Right conduct consists in achieving the proper balance between these two sets. Such a doctrine is obviously aesthetic rather than moral in character.

[9] Philip Dormer Stanhope, Earl of Chesterfield (1694-1773) is the author of *Letters to his Son.*

[10] Francis Hutcheson (1694-1746), professor of moral philosophy at the University of Glasgow, was the author of *System of Moral Philosophy.* He taught that man has been endowed by the Creator with a "moral sense," which is really a desire to please others.

a hard time of it. Who would listen to Paley's [11] demand for healing authority as opposed to measureless self-seeking? Or to Butler's [12] advocacy of discipline? The very opposition to the ethics of comfort itself tended to become æsthetic and forgetful of history. Cudworth,[13] brilliant as he was, took flight out of his own dull time into the artistic mysticism of Plotinos. Meanwhile it was inevitable that the libertine conclusions should be drawn from the Sophistic premises. If fortune and comfort—in short, the well-tempered existence of the noble gentleman—be the goal to seek, then it follows that all means calculated to render one's life quite untroubled are to be used industriously. According to Lord Chesterfield, the best of these means is moral hypocrisy. This can keep the troublesome populace—the populace for which religion must be "preserved"—in order.

Here was cynicism aplenty. But the doctrines which serious thinkers had formulated were soon transmuted into the slogans of a philosophy of immediate usefulness. The good, a new Epicureanism hastened to declare—is whatever is helpful, comforting and likely to create pleasure. Bentham's [14] solution of the ethical problem—his formula of

[11] William Paley (1753-1805), moralist and theologian, was the author of *Evidences of Christianity.*

[12] Joseph Butler (1692-1752), English prelate and theologian, was the author of *Analogy of Religion,* a great and beautifully-written book which still influences many. In his sermons *On Human Nature,* he upheld the guidance of "conscience" as a faculty which is neither a moral "sense" nor an aspect of practical reason.

[13] Ralph Cudworth (1617-1688), English divine and moralist, was the author of *Treatise concerning Eternal and Immutable Morality.* He held that the principles of morality are derived from ideas which necessarily exist in the mind of God and are reflected thence in the minds of all men. Virtually his doctrine is a kind of "moral emanation."

[14] Jeremy Bentham (1748-1832), author of Introduction to the *Principles of Morals and Legislation* and *Deontology,* is one of the more influential among modern moralists and author of the principle that the purpose of morality is "the greatest happiness of the greatest number." J. S. Mill

"the greatest good of the greatest number—" flattered the short-winded lusts of the mob. Next a blind, superstitious belief in "progress" chose this formula as its favorite text.

Æsthetics

Because it is always true that "progress" in the modern sense embellishes at best only the surface of things, the views of the Age of Enlightenment were, fundamentally, æsthetic opinions. In the realm of æsthetics the Age rendered its most important service. Hutcheson laid the foundations of modern psychological æsthetics through his investigations of the effect produced by simple, regular bodies. He pointed out also the great influence of cultivated experience in our enjoyment of new and surprising beauty. Hogarth,[15] on the other hand, followed a line of study which prepared the way for the linear taste of the ornamental baroque style. Burke [16] thought out his psychology of the sublime. Marveling awe is awakened, he said, whenever, under the impact of tremendous impressions, the instinct of self-preservation is aroused without there being any personal danger to life. On the other hand, beauty arouses sympathetic instincts. Henry Home [17] coined the notion of that presence of the work of art which is ideal and remote from time—a happy and brilliant notion, surely.

Deism

Like all refined Epicurean teaching, this "culture of taste" was restricted to salons, where the deistic and humanitarian

described this system as "utilitarianism" and the name has become affixed to it.

[15] William Hogarth (1697-1764) was a realistic and moralistic engraver and painter.

[16] Edmund Burke (1729-1797), celebrated English statesman, was the author of *Ideas of the Sublime and Beautiful,* a notable contribution to aesthetic theory.

[17] Henry Home (1696-1782) was a Scotch philosopher and jurist.

religion with which it was associated could be taught agreeably. Reason, having lost its courage and elan, surrendered to the fashionable doctrine one tenet after another. Lord Herbert of Cherbury [18] declared he had discovered the existence of a "religious taste," which dwelt side by side with the taste for art and morals. With this new "sense" he discerned the existence of God. But the worship of the Creator under a system which proposed to harmonize all religions—John Toland's Pantheistikon [19]—soon became a tame pantheistic enthusiasm for nature. Matter, in which was hidden the energy of life, was thought worthy of adoration. And thus the liberty of reason, emancipated from all tradition, sank to a level which can be compared with nothing except the crude surmises which antedated Thales. Whatever was left of religion was characterized, with a conservatism typically English, as Christianity. For if one could believe Toland, there was no mystery in Christianity.

Toland's purpose was to declare war upon Revelation in the name of reason. If it be reasonable to recognize only the latest hypothesis of physics as the trustworthy solution of the cosmic riddle, then (he said) it is unreasonable to concede the authority of Revelation. With logic of the same variety Whiston [20] repudiated prophecy: it did not, he said quite correctly, employ the scientific methods of weather forecasting. Wollaston refuted miracles,—God's intervention in the procedure of the world,—on the ground that it was modern to recognize nothing but mechanical efficient

[18] Lord Herbert of Cherbury (1581-1648) is virtually the originator of "Deism," a form of religion emancipated from the control of authority and having for its chief principle the moral rule: "Have faith in God and do your duty."

[19] John Toland (1670-1722), author of *Christianity not Mysterious,* was one of the more able controversial deists.

[20] William Whiston (1667-1752) was an English clergyman and also a notable mathematician.

causes behind all forms of dependency. Others, who did not attempt to sharpen their dull wits in discussion of mankind's most hallowed truths, employed allegorical interpretations in the interest of muddled explanations. Tindal [21] discovered a naturalistic primitive religion and endowed it with a score or so of dusty moral maxims. The fact that his new creed did not harmonize with any of the oldest known religions bothered him very little. Whatever did not blend with his spirited philosophy he discarded as having been invented since the primitive period by priestcraft. His was, in all truth, a phenomenal understanding of history! Indeed the Age of Enlightenment soon began to feel a little anxious about its own courage. During a moment of clear vision, Bolingbroke [22] discerned that the sphere of influence occupied by this amenable "primitive religion" was identical with polite society. He cursed the garrulity of deistic literature, demanding for it the torch of the censor because it had become a social plague. Enlightened by some instinct, he saw the shadows of the approaching moral and social chaos. But aristocratic society had given away its secret. It was too late to save it from disaster, or from gross philosophic delusion.

Soul Materialism

During this period of folly, which conceived of knowledge as a process of taking hold of "things," belief in what Locke had termed "soul substance" faded away. To weigh and to measure became the fashion; and how could the soul be

[21] Matthew Tindal (1654-1733), an English theologian, wrote *Christianity as old as the Creation* as his contribution to the deist cause. His contemporary, William Woolaston (1659-1724), was more resolutely a defender of Christianity.

[22] Henry Saint-John, Viscount Bolingbroke (1678-1751), statesman, writer, and friend of famous literary men, was a deist "with modifications."

weighed and measured? Hartley [23] developed a doctrine of psychophysical parallelism between experience and "neural vibration," which involved a helpful scientific simplification. His formula separated the field of the psychologist from that of the physiologist, thus preventing both from working in realms of which they knew little. But the crude point of view to which the Age of Enlightenment finally arrived considered a delicate matter like "experience" very dubious in comparison with a dissectible thing like "nerve ganglia." Priestley [24] sought to combine this materialism of the brain with deism. Erasmus Darwin,[25] however, courageously went the whole way to unadulterated Epicureanism.

Bible Criticism

In Protestant countries especially, the negative philosophy gradually assumed a firm attitude of opposition to the Scriptures. Thus Bible criticism was really launched. Shaftesbury, like Spinoza, devoted his attention to trifling details, meanwhile forgetting all about the central events. Heads ached over such puzzles as whether the voice which Moses heard ought to be interpreted as an "atmospheric vibration" or as a sound which had been perceived inwardly —but nobody had time to remember the immemorial manner

[23] David Hartley (1705-1757), English physician and philosopher, is generally considered the founder of the association school of psychologists. He was not a materialist; and though he defined all knowledge as being dependent upon the brain, he did not identify the brain and the soul.

[24] Joseph Priestley (1733-1804), philosopher, scientist and one of the discoverers of oxygen, pushed Hartley's psychology to an extremist point of view and held that the soul is material.

[25] Erasmus Darwin (1731-1802) was notable as a botanist and a philosopher. *Zoonomia, or the Laws of Organic Life,* his most important work, is curiously reminiscent of Epicurus. Darwin avers that nature is made up of the two substances of "matter" and "spirit," the first of which engenders motion, the second of which receives and transmits motion. Thus a kind of sexual duality was read into the cosmos.

in which God has revealed Himself as a mystical Personality. Spinoza had complimented himself upon the discovery that Revelation assigned themes to the prophets according to their individual temperaments and abilities to comprehend—as if Aquinas had not taught long before that grace develops, but does not destroy, human nature.

Now that several centuries have been busy with attempts to formulate Biblical criticism, it is instructive to observe how it has always been the most recent fashionable hypothesis which has served to explain away the miraculous. Spinoza accounted for the plague of locusts by terming it a meteorological phenomenon, apparently not taking into consideration the circumstance that God might use such phenomena to serve His purposes. Later on hypnosis was relied upon to explain most miracles, and today the realm of the "occult" is the chief means. If the critic had only abstained from a prejudiced determination to reduce Divine action to the level of the merely natural, all these views might have proved valuable. As things are, they merely show that theories swarm down upon us like locusts, eating everything and then disappearing. That is also true, last but not least, of the historical theories relative to the Scriptures. Again and again their estimates, their changing calculations of time, have been accepted as positively correct; and each time it was something different in the Sacred Text that was considered false. The one really astonishing aspect of the whole matter is the readiness with which whatever favorite opinion of the Bible critic happened to be current has been applauded. Obviously not all of these opinions can be brought into harmony, and quite as obviously no agreement whatever is manifested by the critics throughout the centuries. The same keen intelligence wasted here has been expended, in other realms, upon efforts to shroud the sun of Homer, or to declare Shakespeare dead

and Francis Bacon the author of the plays. Superstitious reverence for a little notion entertained by a philologist has sufficed to disrupt many unities into chaotic fragments. But all these things have their day, and one must be a little patient till they die.

The Scottish School

Science and common sense always gain the victory over peremptory literary craft in the end. The Scottish school of philosophy, often unjustly neglected, labored in behalf of common sense. The lucid mind of Thomas Reid [26] discerned the fact that the simplest elements of analyzed perception—the sensations—are by no means component parts of a reality apprehended. We do not meet in the world of real things anything like a mosaic compounded of fractions of sensations. Such a mosaic and its colorful little segments are ideal objects. Many analyses and syntheses do not apply at all to a real object but only to an ideal model *like* the object—a model which, for the sake of scientific description, is taken apart and then reconstructed. The elementary parts of cosmic reality are not always the objects of simplest description or of a single sensory function. A something which calls for a complicated description may nevertheless be a simple element of objective being. Nor need that which can be described simply be capable of separate existence. Again, a real simplicity is inherent in very complex things—a simplicity which belongs only to the *whole* and not to a conglomeration of the *same parts* as are

[26] Thomas Reid (1710-1796), professor of philosophy at the University of Glasgow, stated his views in *An Inquiry into the Human Mind on the Principles of Common Sense, Essays on the Intellectual Powers of Man,* and *Essays on the Active Powers of Man.* He held that "all knowledge and all science must be built upon principles that are self-evident," and so came to be known as the "common-sense" philosopher. His most important service, however, was his lucid analysis of the act of perception.

contained in that whole. Human personality is, finally, an unrepeatable and uncombinable simple reality, despite the complex character of the body.[27]

Thus opposition to the associationist psychology appeared inside its own domain. Though it was at first underestimated, it was bound to attract more and more attention. For the life of the soul is more than a parade of little pictures fastened to one another. Reid emphasized how impossible it is for men to deny the existence of a substantial personality within themselves immediately after they have acted resolutely. And similarly (he thought) the practically active man must inevitably recognize real material things, energies and souls. The student of nature who observes and discovers (with better instruments than a pen) is "practically active" in this sense. Such a student will always find the facile conclusions proposed by the Age of Enlightenment quite unattractive. Like Newton, Robert Boyle,[28] the discoverer of oxygen and oxydation, firmly championed the principle that genuine physics never leads to materialistic conclusions. Here again science was guided by other things than the chatter of elegant salons.

[27] The Scottish philosophers who followed Reid for the most part modified and developed his doctrine. Dugald Stewart (1753-1828), author of *Elements of the Philosophy of the Human Mind,* rejected the materialism of the early association psychologists. Sir William Hamilton (1788-1856), professor of logic and metaphysics in the University of Edinburgh, author of *Lectures on Metaphysics,* and editor of the works of Reid and Stewart, advocated "natural realism" as the right theory of knowledge but was greatly influenced by Kant. He is the subject of much discussion on account of his doctrine of "relativity of knowledge"—a doctrine he phrased ambiguously, but which seems to mean that the rightness of our knowledge is relative to the rightness of our "phenomenal" states. See W. Turner's *History of Philosophy* and J. S. Mill's *Examination of Sir William Hamilton's Philosophy.*

[28] Robert Boyle (1627-1691), an Irish chemist and philosopher, made discoveries of great scientific importance.

3. Enlightenment in France and Germany

Many have been accustomed to regard the French era of Enlightenment as most representative because of its influence upon other countries, particularly Germany. But Enlightenment was really not the achievement of the French genius. More than relatively it was, in so far as France was concerned, an affair of the literati, and certainly not a philosophic revolution. This must be considered more paradoxical, brilliant and political in tendency than was the negative philosophy of England, but most of its dominant ideas were derived from England. It was more prodigal of wit and scorn—even though there is no doubting the fact that the cleverness of Voltaire is considerably more out of date than the irony of Aristophanes. Scorn, which lives when it is a sudden gesture, becomes a gargoyle when it strikes a pose. Up to a certain point, the eighteenth-century tendency to look upon the senses with favor (which was part of the new revolutionary doctrine) had the salutary effect of tempering that exaggerated rationalism which had characterized the classical French mind. In this respect, Pierre Daniel Huet [29] performed a genuinely important critical task.

The Dictionary

But soon destructive ideas, which pulverized the unity of personality, were in control of the day. The normal rising curve of philosophy, which leads in favorable epochs from indefinite pantheism to purified monotheism, was almost reversed by the new negative philosophy. The emptier and more satirical the French emancipators became, the more quickly they squandered the power to hold fast to the austere

[29] Pierre Daniel Huet (1630-1721), a noted French scholar, was bishop of Evranches.

and lofty idea of God in all its purity. In the aftermath of a tired polite pantheism there appeared (as in all epochs of philosophical decay) a complacent materialism. The restless, more and more thoroughly corroded personality of Bayle [30] dealt in the famous skeptical *Dictionary* with polyhistoric learning, with the contradictions between faith and the theories of the hour. He proved to his own satisfaction that faith contradicts reason, even though he upheld faith in a neat paraphrase of Tertullian. Perhaps he really wished to cling to religion; but he helped to separate society from it. His doctrine that morality is independent of faith, derived no doubt from the speculations of Shaftesbury, could only scare people farther away from "unreasonable" faith.

Voltaire

Voltaire (François-Marie Arouet),[31] very remarkable master of style, man without shame and all-but-mediocre philosopher, was, in so far as his materials were concerned, wholly derivative from England. He popularized a grossly adulterated version of Newton's philosophy of nature. He

[30] Pierre Bayle (1647-1706), successively Catholic and Protestant, enemy of superstition and literary critic, is remembered chiefly for the work he did in compiling his *Dictionnaire historique et critique.* This monument of cynical erudition concerned itself chiefly with religious and philosophical problems. Heresies were treated sympathetically; orthodoxy was dealt with briefly and contemptuously. The materialistic philosophers received the author's praise; the idealists were dismissed with something like a pitying smile. The roots of French skepticism were therefore embedded in fertile soil.

[31] François-Marie Arouet, remembered as Voltaire (1694-1788), is the most mordant of all religion-haters and skeptical satirists. Master of a clear and insinuating style, witty as only a certain type of Frenchman can be, he succeeded in undermining confidence in all that the Christian seventeenth century had meant in France. *Essai sur les Mœurs* is probably his most philosophical work, but Voltaire was not in any real sense a philosopher at all.

summoned Shaftesbury's ethics and Locke's critique of knowledge to help "strangle superstition" or—as the matter might have been defined more succinctly—to slander the religion of Jesus. Voltaire's pigments were often of the vilest origin, but they were appropriate for caricatures of the saints. Recognition of authority, he declared, was stupid and pernicious. The effect of all this upon his philosophy was obvious: only a complete ignorance of the historical past could have caused Voltaire's thought to arrive so definitely as it did, in its final stages, at primitive hylozoism. His benevolent but tame deism, as well as his grandiose notions of the rights of men, were mere literary themes. Nobody ever trampled these notions underfoot more readily than did this arrogant cynic—a point which Frederick the Great threw at Voltaire point blank with considerable justice.

Decadence

The physics of Newton fared as badly at the hands of the Age of Enlightenment as did Lamarck's [32] thoughtful attempt to formulate an hypothesis which would explain the origin of biological species. Various tiresome misunderstandings of Lamarck's theory were due to the distortions and exaggerations characteristic of the "enlightened" mind. It was likewise philosophical decadence which caused Robinet's Vitalism, capable of having breathed life into the evolutionary theory, to remain embedded in hylozoism, despite the evident influence of Leibnitz. For revolutionary France decided that Locke rather than Leibnitz was to be its important teacher. Like Locke, Condillac [33] stated the

[32] Jean Baptiste de Lamarck (1744-1829), a French zoologist of genius, applied the notion of development to the origin of biological species.

[33] Etienne de Condillac (1715-1780), French priest and philosopher, wrote a *Traité des sensations* in which he held that consciousness contains nothing excepting "sensations transformed." The sense of touch he considered most

problem of the psychological origins of knowledge; with Locke he distinguished between primary and secondary qualities, and concluded the unknowableness of substance. He also considered idea merely the content of representation, as that developed out of sensation. The most important of such "contents" (said Condillac) is the sense of touch, which reveals that which is impenetrable. Soon the French, resembling in this the English, ended in complete materialism. La Mettrie's [34] jaunty Epicureanism paraphrased Hobbes as poorly as the "Garden Philosopher" of antiquity had paraphrased Democritos. Man was seen as a machine (materialism is always the same) and physics was summoned to furnish an explanation of that machine. Intelligence as the originator of this machine was as completely forgotten as the intelligence which orders what the senses perceive. Indeed, the senses themselves became philosophers. La Mettrie—again improving on Hobbes—joined the chorus of antagonism to Christianity, and praised sensual pleasure more fulsomely than the ancients ever had. He never grew tired of contrasting the happiness of atheists with the misery of those who believe in God. No doubt it was a logical consequence of his philosophy that he died from eating too much pastry.

La Rochefoucauld [35] summarized in glittering maxims the cynical ethics of Chesterfield and Bolingbroke. In a different vein the friendly Helvetius,[36] to a considerable

important because without it man would attribute all other sensations to himself.

[34] Julien de La Mettrie (1709-1751), a French physician, wrote *Histoire naturelle de l'ame* and *L'homme machine,* in which "soul" became "brain," and "thought" a "function of the brain."

[35] François de La Rochefoucauld (1613-1680), author of *Maximes Morales,* was one of the most cynical of French epigram makers.

[36] Claude Helvetius (1715-1771), author of *De l'esprit* and *De l'homme,* announced, among other things, the equality of all men in so far as endowments are concerned.

extent a debtor to Hobbes, professed a form of Epicurean moral teaching in an amiable fashion that was, however, fundamentally insignificant and aloof from mankind. The French Revolutionists also followed British conclusions regarding statecraft. Montesquieu,[37] like Locke, eulogized England's constitutional monarchy, declaring it the model for all governments. The entire movement of French Enlightenment was then compactly codified in the great *Encyclopedia*,[38] the primary inspirer of which, Denis Diderot,[39] energetically turned himself into a kind of proteus of negative philosophy by personally living through all its phases. He began as a theist, became a deist and an enthusiast for virtue after the fashion of Shaftesbury, prayed to the universe, and ended—after having been forsaken by his comrade, the more profound d'Alembert [40]—as a materialist. It was Goethe who summed up the movement by pointing out how the French Age of Enlightenment, having discarded all the good ideas of Democritos, ended in "sad atheistic twilight."

Rousseau and Nature

The courtly culture of France had considered itself natural, unaffected, humane and reasonable. Then the unrestrained arbitrary will of typically "modern" monarchs had

[37] Charles de Montesquieu (1689-1755), author of *De l'esprit des lois,* advocated parliamentary government and an independent judiciary, recommended the English system, and studied the influence of environment and geography upon national society.

[38] The *Encyclopedia,* edited for the most part by Diderot, Voltaire, d'Alembert, Holbach and Rousseau, stated the "new wisdom" smartly and brilliantly, destroying belief in God among many and, of course, undermining tradition.

[39] Denis Diderot (1713-1784) may be seen to advantage in his published correspondence. After 1749 his opinions became definitely atheistic.

[40] Jean d'Alembert (1717-1783) wrote the "preliminary discourse" for the *Encyclopedia.* His various other works are scholarly but philosophically unimportant and dull.

practically established the cult of the Epicurean ideal of pleasure. Kingly personality, grown empty and hollow, thought not of the work it alone could have accomplished but only of itself. Therefore it was denounced by the heralds of Revolution as contrary to nature, as artificial, inhuman and meaningless. Noble and fortunate shepherds, the exemplars of pastoral poetry, were not to be found (said Jean Jacques Rousseau [41]) at the courts, but only among people who dwelt close to nature. Man, as Rousseau saw him, is good and uncorrupted when he is natural. What though Leonardo da Vinci, Machiavelli, Calderon, Shakespeare, Hobbes and Bellarmine had known that man is corrupt by nature and hides a ravenous beast within his breast? What though Pascal had built his towering faith upon this fact? The Revolution was flaring up and would refute not merely Rousseau but the whole spirit of the Age of Enlightenment. The war of all against all was brewing. Art, too, had announced the fate of a waning courtly culture. The prophetic melancholy of Watteau [42] had flung its shadow over the pastoral festivities of society. Le Sage [43] and Beaumarchais [44] had written its satyr drama. And so there was only one possible conclusion and it came: Napoleon, the scourge of a hundred ideologists, sealed with his cannon the bankruptcy of Enlightenment and of freedom *à la Rousseau.*

German Enlightenment

Nobody can term the German Age of Enlightenment a glorious or significant epoch. Dependent upon both France

[41] Jean Jacques Rousseau (1712-1778), author of *Émile.*

[42] Jean Antoine Watteau (1684-1721) was a delightful but melancholy painter of life in upper social circles.

[43] Alain Le Sage (1688-1747), author of *Gil Blas,* a classic novel of manners, was also a playwright.

[44] Pierre Caron (Beaumarchais), who was born in 1733 and died in 1799, wrote among other things *Le Barbier de Seville* and *Le Mariage de Figaro.*

and England, the stiffly starched paraphrases of German "Lockes" and "Voltaires" are not worth much notice. An exception is demanded for those writings in which something of the spirit of Leibnitz lingered on, or in which Immanuel Kant was anticipated. Christian Wolff,[45] an intelligent and diligent pedant, sought to systematize the doctrines of Leibnitz. It appeased his vanity to lower the tempo of his master's conclusions through such expedients as restricting the notion of preëstablished harmony to the relations between man's soul and body. His modest but numerous school of disciples swore by him. There is precious little substance in his dry and cautious, endlessly copious "proofs." In his philosophic herbarium he parched the monads of Leibnitz to such an extent that nothing was left excepting atomic dust. The spiritual bond between those monads—the synthetic, world-forming function of thought—was lost sight of until Kant concerned himself with it minus, however, the notion of spiritual substance.

No one now understood how the thoughts of an investigator could faithfully mirror the world; for that investigator was no longer conceived of as a microcosm. What reason remained for saying that the individual is determined by differences in ideas, when the soul was no longer regarded as containing within itself the capacity for contemplation of the nature of the world? These questions engrossed Kant, the disciple of Wolff, but they did not puzzle Herder,[46] the

[45] Christian von Wolff (1679-1754) was a formalistic philosopher. One or the other of his schematizations has been generally accepted in the teaching of philosophy.

[46] Johann Gottfried von Herder (1744-1803), eminent German philosopher, theologian and critic, was a voluminous writer who influenced the greatest minds of his time. *Ideen zur Philosophie der Geschichte der Menschheit,* an attempt to formulate a philosophy of human history, is possibly his most significant book. Recently a change in attitude regarding Herder has been sponsored by Josef Nadler and other historians of literature and culture. There is a life of him, by Nevinson, in English.

disciple of Leibnitz. That lofty reflectiveness, borne up by which the soul hovers between contemplating and thinking the world, became a narrow rationalism in the doctrine of Wolff. To him "reasonable" meant only that which is clear and understandable to the unadulterated philistine. The universal purposes of Providence, the development of the soul in the direction of perfection—matters to which Leibnitz had given so much profound thought—were kept out of sight. The meaning of events was held to lie in the solid comfort of the average citizen. Thereby the habit of teleological thinking was brought into disrepute. Later investigators of nature would hardly know anything about teleology excepting the impressions of it which Wolff had presented in a garbled version. Of course he did divide philosophy into compartments labeled "ontology" and so on.

What Wolff accomplished in metaphysics, Gottsched [47] sought to wreak on the muse of poetry. Then Alexander Baumgarten [48] founded, for Germany, æsthetics as a systematized pedantic science. If one credits his doctrine, it is the task of logic to teach perfection of thinking according to rule; of ethics, to teach perfection of resolves. There must also be, however, a perfect perception of beauty. And since the contemplation of nature is formulated according to the laws of reason, reasonableness must gleam forth clearly from perfect perception. Having absorbed this doctrine, Lessing [49] applied to art his questionable didactic maxim, "Tell the truth by means of a picture to those who are not very sensible."

[47] Johann Christoph Gottsched (1700-1766) was for a time virtually the literary dictator of Germany, but developed into a notorious pedant.

[48] Alexander Baumgarten (1714-1762) was a professor of æsthetics.

[49] Gotthold Lessing (1729-1781) was the first great German dramatist, whose *Nathan der Weise* is here referred to. *His Laokoon,* a summary of æsthetic doctrine, is even yet of very great importance.

Lessing

Lessing was great enough to divine that a work of art reflects the metaphysical character of the world, the soul and man (and not a series of didactic phrases) in unique and highly personal form. He, whose taut reason mastered the complexity of æsthetic rules, undoubtedly knew their insufficiency better than did all his associates of the Age of Enlightenment—associates who were palpably lesser fry than he but against whom he was destined to carry on a bitter struggle while remaining tragically misunderstood. Knowing how to write comedies according to the French classical rule, he exalted the creative Shakespeare. Understanding the framework of tragedy better than Batteux[50] did, he repudiated this man's imitation of nature in favor of the Aristotelian concept of form. But in order to give currency to his superior views, the unhappy master-critic was often obliged to fire with heavy artillery upon houses of cards; and it is this which makes much of his most brilliant writing seem ephemeral in interest. How remarkable is that magnificent irony with which he turned against himself in declaring that he composed "according to reason," whereas Shakespeare had been a blacksmith dealing with molten metals.

Here at last the typical "Enlightenment" habit of self-esteem gave way to budding irony. But even so the unhalting self-decomposition of personality abided everywhere. Lessing was too significant a figure to bring an accidental defect in his spiritual constitution before the public without considerable hesitation. He was the modern time, and all its virtues as well as its fatal malady were in his bones. Nevertheless he was truly greater than his era; he saw clearly that reality enshrines hidden goods and values of

[50] Charles Batteux (1713-1780) was a French critic.

which calculating, synthetic reason knows nothing, and he understood history much better than Kant did. He even found time to meditate upon the great thoughts of Augustine concerning the education of mankind. But Lessing paid dearly for his environment, and negative doctrine has the upper hand in his work. His notion of tolerance, which has been highly praised, certainly did not envisage Christianity. In his famous drama of tolerance, *Nathan the Wise*, all Christians are either frankly roguish or stupidly asinine —with the exception of one, who happens to possess Saracenic blood. It is really surprising that modernity has seriously considered him tolerant; but after all it has done as much for Voltaire.

Lambert and Tetens

Two precursors of Kant rose superior to the low philosophic level of their time, even though they lacked the greatness of Lessing. Lambert [51] devoted his attention to theoretic figures, the nature of which is not derivative from experience and with which actual occurrences may nevertheless be compared with some success. He was particularly interested in the application of simple standards of measurement to astronomical orbits; and he also saw more clearly than Kant would the large number of empiric elements that are absorbed into mechanical constructions.

The brilliant psychologist Tetens [52] investigated the synthetic function of the institution and finding of relations. He was able to differentiate between the acts of consciousness more skilfully than the earlier psychologists had managed to. Introspection (he thought) reveals relations which are not contained in sensation. They are grasped

[51] Johann Heinrich Lambert (1728-1777) was a German-French scientist.

[52] Johann Nicolas Tetens (1736-1805) tried to do for Germany what the Encyclopedists had been doing for France.

only during the course of the activity of *thought.* This thought is capable of instituting relations spontaneously. Thereby sensation becomes the *content* and thought the *form* of knowledge. Thought must be understood, then, not merely as intending, meaning, signifying, but also as formative. It is essential above all (Tetens concluded) to establish a clarification of the necessary thought-forms. Here the difference between *accepted* and *formed* relationships, as well as the difference between accepting and disposing thought, was overlooked. But with the demand for a scientific formulation of the thought-forms which consolidated our picture of the world, the great problem of modern critical philosophy had been stated.

CHAPTER V

CRITICAL PHILOSOPHY: HUME AND KANT

I. David Hume and Mechanical Causality[1]

The Renaissance and the Age of Enlightenment had given up thinking about those prevailing and manifold dependencies which fasten the structure of the world together. It was now believed that of them all only logical sequences and mechanical motor causes were of importance. Creative formation and preservation, effective cause, connection in space, interchange of influence between body and soul, the scope of free-will:—*all these were to disappear or were to be replaced, rather, by mechanical causality.* The concept of causality was therefore greatly narrowed. The engrossing question was this: Is it possible to prove the certainty of a mechanical causality, acting necessarily and without exception, from the facts gathered by scientific observation with the methods of the special sciences—that is, without recognizing a universal order ordained by Omnipotence, harmoniously regulated by Omniscience, and productive of that harmony between the soul and things which is called knowledge of truth?

Scientific facts and methods were the only ones which the modern spirit, dissociated as it was from tradition, could

[1] Note: Among general treatises the following may be named: K. Fischer's *History of Modern Philosophy;* F. Ueberweg's *History of Philosophy* (Vol. 2); and (incidentally) J. T. Merz's *History of European Thought in the Nineteenth Century.*

honestly recognize. Kant would answer the great question by saying that there is reasonableness in the investigations undertaken by the separate sciences only when one grants in advance, logically, the prevalence of cosmic dependency. And he was right, if it be the idea of philosophy to erect over and above the separate sciences a science of cosmic unity. But it would still remain necessary to prove that *all* cosmic dependency is without exception *mechanical* cosmic dependency; and that is impossible.

The Assumption of Science

David Hume [2] made a clearer and sharper distinction. Modern special sciences would not cease to be scientific (he declared) if they were nothing more than archives or depositories for the facts accumulated by observers. Nevertheless it would be easier to describe a world bound together in every part. And therefore it is practical, helpful and reasonable (from a technical point of view) to *assume* the universal dominion of this causality. It so happens, however, that one cannot prove the chains of mechanical causality absolutely indissociable; that one cannot show that ingress of a higher order is not sometimes able to change the direction of energy; and that one cannot demonstrate that the formulæ of approximation which science calls natural laws always hold good without alteration. We can merely

[2] David Hume (1711-1776) was a man whose concern with philosophy never completely severed him from the world of his time, true though it be that his first book, *Treatise on Human Nature,* created no stir at all commensurate with the three years of hard work spent in writing it. Later on, however, this work, expanded into three books (*Enquiry concerning Human Understanding, Dissertation on the Passions,* and *Enquiry concerning the Principles of Morals*), gradually found its place as an estimable philosophic classic. Hume served on several diplomatic missions, was once an under-secretary of state, and held for some time the office of keeper of the Advocates' Library in his native city, Edinburgh. His *History of England* was able but not altogether impartial or accurate. There are monographs by Huxley and Knight.

expect, with a confidence that suffices for all practical purposes, that the same result will follow from the same conditions. Neither the individual scientist or science itself would have to close shop if an exception occurred. That would simply be recorded. Even though it could never be explained away or accounted for satisfactorily, scientific investigation would nevertheless proceed with its task.

Thus Hume made clear that it is possible to explain man's ordinary impressions of the universe without recourse to the notion of a strict causality operative in nature. Of course he was obliged to take cognizance of psychical dependencies also; and these he termed "associative" dependencies. Like his predecessors Locke and Berkeley, he set out to make his psychology solely out of sensations, representations and their combinations. The arbitrary character of this viewpoint accounts for the defects in his system of pure Positivism, which has continued, by reason of its great clarity, to fascinate prominent students of nature even down to the present day.

What Is Truth?

Human consciousness (he says) contains unsummoned and summonable contents, i.e., sensations and representations. The representations are copies of the sensations. Truth is the coördination of a sensation with a representation exactly similar to it; error consists in associating with a representation some similar sensation not entirely apt. Representations are interwoven in associative fashion. Moreover, sensations similar in character, contrasted or associated in time and space, awaken images of one another. Man feels an especial confidence in sensations which cannot be denied and in representations to which he is accustomed. He accepts these as *signs* of a reality that would otherwise be inaccessible. Mathematical demonstration then supplies

measurement of the similarity of representations. The elements of geometry (points, lines, surfaces) have their origin in experience. Out of our inability to set an end to the phantasms of continuous coördination, we gain representations of unbounded space and endless sequence in time. Mathematics cannot, however, form judgments about a reality that remains inaccessible. Repeated impressions of a juxtaposition of sensations, which can be remembered because of contiguous association, awaken the representation of uniformity and the familiar assurance that substances exist outside of us, independently of our observation. Yet, since we can have no sensation of a substance, the existence of real material entities cannot be proved. To our uniform familiarity with the associative correlation of representations when sensation is not present, we owe our confidence in the reality of a soul substance, the existence of which empiric psychology cannot establish. The ego is merely a bundle of contents of consciousness.

This thoughtful theory is tenable so long as one violently restricts the facts discernible in observation of our inner selves. Hume completely overlooked invisible similarities which can be calculated—for example, animals not alike in shape can (fishes in the water, birds in the air) employ relatively the same energy in differing media. Mathematics can, therefore, cross the border of what is capable of being *represented* as far as it cares to. Regularity and similarity as such are also not representations, because we have no sensory impressions of them. The same thing may be said regarding inability to break off the sequences established by imagination. Nor is the experience we have of the ego a "bundle"; it is essentially simple. My sensations and representations, my joys and resolutions, are not, as a matter of fact, lumped together. A bundle of representations, moreover, could not be capable of *doing* anything.

Thus facts of experience not reckoned with and knowledge of relations not utilized estranged Hume's theory from reality. That does not, however, render his criticism of natural laws valueless. It is quite true that the universal reign of mechanical causality cannot be proved by the methods of the separate sciences, no matter how vast their accumulation of observed data may be. Compared with all that happens in the cosmos, the phenomena we observe are always only a handful. But Hume's Positivism, in many respects the philosophical opposite of Platonic idealism, is a very one-sided though intelligent theory of the world, for the reason that it accepts in principle only the methods of the exact sciences (which in Hume's time were still rather primitive) and because it denies in advance the possibility of many kinds of dependency without having investigated them.

Ethics

Hume, illustrious as a critic of knowledge, was not blind to matters which lay outside the realm of theoretical science. He was a great historian and an interesting moralist. His psychology of the will emphasized the motivating power of feeling, but misinterpreted the activating force that lies in knowledge of a goal. Instead of the theoretical confidence which characterizes certain representation-complexes, a feeling of "sanction" (he said) prevails in the realm of ethics. In connection with this subject Hume, faithful to his habits of mind, observed impressive facts of experience. The source of good action cannot be self-interest (he held), because we sanction talent, endurance, courage and circumspection even in an enemy who does us an injury. Similarly this sanction, which is more than instinctively sympathetic, combines human beings into social groups. In his discus-

sions of society, Hume spoke as the friend of Adam Smith.[3] He held that our actions, even those which are good, do not originate in calm reflection alone, but come to be for the reason also that sympathy ennobles and develops charity. And so, through his teaching, ethical consciousness, though still inchoate and rather vague, began to tower once more above the partly brutal, partly sentimental morality of the Age of Enlightenment.

One may sum up Hume's service by saying that through his criticism of Epicurean ethics as well as of the universal efficacy of "natural laws," he opposed the decline of spiritual life which negative philosophy symbolized. His more modest concept of the range of human knowledge and his insight into the value of an ethical code derived from charity was destined, in the long run, to win out over the more brilliant views of Immanuel Kant. But the great problem of the premisses of the separate sciences and the basic forms of the relating and organizing mind had to be stated in order to reveal the shortcomings of Hume. And it was Kant who stated it.

2. Immanuel Kant and Transcendental Reason

In our time a thinking person who has not talked things over seriously with Kant,[4] cannot claim the title of phil-

[3] Adam Smith (1723-1790) is chiefly renowned as the author of *The Wealth of Nations,* the first modern, scientific treatise on problems of economics. From a philosophical point of view Smith's *Theory of Moral Sentiments* is, however, probably more significant. He held that an act is good if the spectator can sympathize with its effect, and analyzed this "sympathy" from its embryonic stage to its complete form as a moral mandate.

[4] Immanuel Kant (1724-1804), the "sage of Königsberg," led a life in which philosophy was almost the sole interest. During twenty-seven years (beginning with 1770) he taught in the university that had conferred fame upon the town in which he was born. It is said that his family was of Scotch descent, but there never was a more whole-souled German than

osopher. This statement does not of course imply that one must become and remain a Kantian. Indeed it is highly probable that a conscientious criticism is more worthy of the memory of this surprising spirit than any amount of worshipful dust blown about by camp-followers singing "Amen" to all he said. The work of Kant should be viewed patiently as a carefully erected structure, to the building of which a simple life of heroic renouncement was sacrificed.

What Is Thought?

Kant, like Descartes a gifted student of natural phenomena, drew into the center of his system the judgment: "I think." But he realized more fully than had Descartes that recognition of this function proves nothing about the existence and nature of him who thinks, and nothing about

Kant. Beginning his career as a student of philosophy, he was greatly fascinated by the teachings of Isaac Newton and Christian Wolff. After some years spent as a tutor, a *Privatdocent* (a position akin to that of an American lecturer, but licensed by the government), and a budding writer on physics and metaphysics, he acceded to the Königsberg University chair of philosophy. Soon he began to find his teachers inadequate, and evolved an independent system which gradually flowered into that unusually influential doctrine which his major books present. Kant's life, so utterly without secondary interests, calls to mind Walter Pater's phrase about burning with "a hard, gem-like flame." Unmarried, untravelled, unfamiliar with music or art,—in short, unaffected by the hum of the world,—he dwelt inside the speculative universe he had built for himself. One must add that he clung uncompromisingly to a morality of the loftiest and sternest sort. "The starry sky above him and the moral law within him" were sources of inspiration to which he turned so constantly that if life could be merely philosophy he would abide as the model of how men ought to spend their days.

Kant's important books are three: the *Critique of Pure Reason* (restated so much more clearly and effectively in the *Prolegomena to any Future Metaphysic* that this has, for all practical purposes, taken its place); the *Critique of Practical Reason;* and the *Critique of the Faculty of Judgment.* The more important presentations and criticisms of his work will be noticed as the present volume proceeds. One may also consult the following: E. Caird's *Critical Philosophy of Kant,* F. Paulsen's *Kant.*

the substance of the soul. It is true that the judgment, I think, implies assent to the sentence, "I am I." But *what* "I" am has not yet been made clear. Kant, therefore, set out to define the notion of thought more adequately, and so established himself primarily as a "critic" of philosophical assumptions. First of all he noted certain general characteristics of thinking. Thought in so far as the individual is concerned (the individual being unknown) is a *homogeneous synthetic function.* When the individuals are more than one, thought is *comprehension.* It remains one and the same functional organization in those otherwise variously endowed with reason.[5] Thought therefore postulates that harmony exist between the judgments formed by an individual, and in the final analysis it excludes differences of opinion among different individuals. All acts of thought are synthetically and *inwardly* correlated with one another; and thought is *outward* attentiveness to manifold objects. Thought contains *harmonious* correlations of manifold individuals who are *unifiedly* concerned with manifold objects. Furthermore, Kant conceived of thought as the material location of ideal objects, and as the *form* of all varieties of knowledge, so that its acquisition was spoken of by him as formed material.

The *object* of thought is always "something." The opposite of this—"nothing"—can be conceived of only as varied "not-anything," or as opposition which cannot be removed. The manifold[6] becomes nothing if it cannot be reduced to

[5] Kant thus distinguishes between "understanding" and "reason" (*Verstand* and *Vernunft*); "All our knowledge originates in our senses, proceeds from that to the understanding, and thence to the reason. . . . The understanding may be defined as the faculty of reducing phenomena to unity by means of certain rules; reason, as the faculty of reducing the rules of understanding to unity by means of certain principles." (*Critique of Pure Reason.*)

[6] "The manifold" is taken to mean the whole matter of representation (sense-impressions, etc.).

unity, and unformed matter does not exist. "Something" is either of one kind, of many kinds, or of all kinds. Objects either harmonize, or there exists opposition between them. The *relationship* between objects may, therefore, be inner, outer or harmonious. "Something" may be either matter or form or formed matter. When the function of thought directs itself toward its object, it either compares or distinguishes. It examines objects as to their uniformity or differentiations, as to their harmony or their opposition. It asks if their relations are inner or outer, and if the objects themselves are matter or form. In short, thought compares according to Quantity, Relation and Modality.[7]

Thought is a homogeneous function but it is directed toward different areas of objects. That thought which makes abstractions from the differences between these areas is *formal* thought. The same function is, however, also directed to the area of the senses. Used empirically, its object as a transcendental function is either the realm of the manifold outer senses or the realm of the unitary inner sense. Used hyperphysically, its object as a transcendental function is the real things-in-themselves.[8] Here harmonious synthesis is its final task. Ideas, visible matter and real things are, therefore, the different basic objects of the homogeneous function of thought.

Time and Space

Agreement between concepts is logical identity. Difference between concepts is based upon differences of symbol; difference encountered by the senses is difference of location. Conflict between concepts is contradiction; between

[7] Quantity may be universal, particular, or singular; Relation may be categorical, hypothetical or disjunctive; Modality may be problematical, assertory, or apodeictic.

[8] Thing-in-itself: *Ding-an-sich; noumenon.*

sensory phenomena, resistance. In the realm of ultimate reality, however, conflict is that which is metaphysically evil. The innermost part of concepts is their nature; things viewed from within would be monads, but seen from without are nuclei of energy; but the external relation of sensory perception is nearness in time and space. Error is occasioned by any confusion between the areas of objects. For example, this sentence applies to concepts: A homogeneous concept, thought several times, remains homogeneous. One cannot (acording to Kant) apply this principle to things. Things having the same properties may exist several times—that is, in different places.[9] The comparative concepts of "inner" and "outer," as well as the concept of form, apply more accurately in the realm of the senses. Here "inner" form is time, "outer" space.

Quantity and Quality

Time and space permit of calculation. As ideal forms they may be filled with the ideal constructions of mathematics. Mathematical judgments, though deduced *a priori*, nevertheless hold good for time and space because these are not properties of things. Kant employs the "comparative concepts" as a *genus proximum*, and the "areas of objects" [10] as *differentia specifica*, in order to define those anticipatory schemata of experience and those categories which are the fundamental forms of synthetic thinking. Intuition of all kinds (he holds) takes place, *quantitatively*, in the sequence of time. Sensation of the content of time is *qualitative*. The manifold content of sensation cannot be accounted for systematically, but can only be organized. The sensation

[9] Kant believed that this distinction disposed of Leibnitz's insight into the far-reaching individuation of the cosmos. In reality he had merely dealt with Wolff's statement of Leibnitz's principle.

[10] Areas of object: inner sense, the outer manifold, reality.

must have its origin in an unknown source, the thing-in-itself. The relation governing perception is the time order. The true purport of time, however, is experience. The basic forms of thought are now to be separated entirely in the different areas of objects.[11]

Categories

Space and time are ruled by mathematical laws. Nature as perceived obeys an outer law. Metaphysical reality, however, obeys the inner law (which is the moral law), while logic is ultimately subject to formal law. Therefore homogeneity among ideas is singular, difference particular, homogeneity in spite of difference universal. Logical agreement brings affirmation, logical contradiction brings negation. The relation between judgments is consequence. In the time order of nature, however, the external relation is causality. The other twelve categories [12] established by Kant are all defined in the same way. For example, homogeneity in time-sequence is *unity*, differentiation in time-sequence *plurality*. Where there is agreement about the natural time-content, there is *reality*. Resistances are seen

[11] "Space does not signify any property of things, whether one views these in themselves or in their relations one with another, and is not something that would abide if abstraction of all the subjective conditions of intuition were made. . . . Space is nothing else but the form of all external phenomena, that is to say, the only subjective condition of the sensibility in which it could be possible for us to receive an external intuition."

"Time is not something that could exist by itself or could belong to things as an objective characteristic. It would not remain after one had abstracted from the intuition of it all subjective conditions. . . . Time is nothing else but the form of the inner sense—that is, of the intuition of ourselves and of our interior state." (*Critique of Pure Reason.*)

[12] The list of the categories is this: Unity, Plurality, Totality; Reality, Negation, Limitation; Subsistence and Inherence, Causality and Dependence, Reciprocity; Possibility-Impossibility, Existence-Non-Existence, Necessity-Contingency. These merely enumerate the different kinds of relation that may exist between subject and predicate.

as *negations*—that is, energies with negative signs. That which is *intrinsic* in the time order is substance. *Possible* is that which is capable of form within the time-order of experience; *actual* is anything that is the material of experience. *Necessity* has dominion over everything that has form.

The Categorical Imperative

In the moral world, maxims hold good for an individual, mandates for many, laws for all.[13] The moral problem is, therefore, to choose maxims of such a kind that they can be passed on to every man as laws. Opposition to this moral time-content is crime. Intrinsic in the moral world-order is the real soul of man. The outward effect, which creates moral order, has its origin in metaphysical liberty. One places oneself in harmony with the universal order by obedience dictated by respect. The form of ethical law is the stern command. This Kant formulated as the "categorical imperative." In the face of this imperative, it is not permissible to appeal to the universal coördination of all things through mechanical causality; for mechanical causality rules only in the realm of ordered perception.

Causality

The law of causality is expressed in the form of the hypothetical judgment. Every pertinent declaration concerning an exchange of energy begins with "whenever." If the changes which externally follow one another in time-sequence were not inwardly so regulated that every change in result necessarily follows from a change in conditions, science based upon experience would be impossible. Likewise these changes only then make experience, measurement and cal-

[13] This portion of the argument is contained in the *Critique of Practical Reason.*

culation in advance possible when substance is preserved throughout them. This objective ordering of perception synchronizes with the concordance of certain shapes with the apperceptive ego. These are beautiful symmetrical figures, individual creations, which, without being based on a concept, please all individuals by reason of the fact that the manifold conflicting definitenesses of design have been eliminated. The harmonious exterior which expresses the interior is beautiful; and beautiful is that material thing which through its synoptical shape pleases all. This delight in shape is essentially different from the feeling of pleasure which is enkindled by many material things, as well as from the feeling of respect inspired by the moral law.

The Soul

A soul which wishes to fulfill the moral law is, when it resolves to act, also convinced of the metaphysical freedom of its will. But since this freedom can be ascribed only to things-in-themselves—for in the province of sensory phenomena the thought-form of mechanical causality would have to be applied—the soul convinced of its freedom is also morally convinced of its own existence. In the time-sequence, the soul is an unconditioned unity and non-composite simplicity—it is, in short, the inner substance of the moral time-order. The moral law demands unconditional fulfillment (since it applies to an unconditioned substance) and so exacts justice and retribution. Experience tells us, however, that this retribution is not always realized on earth. Therefore it is in practice necessary to believe that there must be a life beyond for man's immortal soul. And because perfect justice can be dispensed only by Omniscience and Omnipotence, the practical reason must believe in the existence of God.

Thus the impressive voice of conscience convinces man of

the existence of his soul as an unconditioned substance, of freedom as an unconditioned operation, and of God as the unconditioned first cause of the cosmic system. So Kant taught, nurtured as he had been in the religion of Pietism. Men cannot, however (he added), gain theoretic certainty of these metaphysical truths through any kind of demonstration. They have no complement in perception to give them content. Reason used transcendentally is over-ambitious; and it is only practical faith which gives wings to the soul.

Premisses

It may be noticed first of all that Kant introduced into his system a number of premisses which he had not tested by the standards of a critic of knowledge. He seemed to consider two general considerations sufficient to prove the validity of his system. First he posited without proof English sensory atomism. He sees the bases of perception [14] as elemental, unordered and unobjective sensations—as the "chaos" of sensations. Secondly he assumed that geometrical judgments are arrived at through intuition, holding that shapes are all either deduced or postulated, that thought is not assimilative in character, and that one's sensations can be ordered by one's thoughts.

His chief arguments, based upon these assumptions, are: The function which gives order to sensations, fashions memory representations, and judges, is one and the same—synthesis. A substance metaphysically unknowable comes face to face with manifold objects and kneads this chaos into form. The space which geometry organizes constructively with its figures, is exactly the same as the space in which we impose order upon our sensations. And time, within

[14] That is, in the attempt to attain knowledge of what is not given in perception.

which experience takes place, is governed by the same measurements as the time within which the facts we observe alter themselves.

Conclusions

The conclusions of Kantian transcendental idealism follow from these premisses and arguments. Time and space are forms of perception independent of moving masses. The categories do not apply to things, but to ordered sensations. Their intention can only be fulfilled by perception. Reason lays down the law of appearance; and thoughts of which no perception can be formed are incapable of demonstration. We can know nothing about God, immortality and freedom; in attempting to prove them real we involve ourselves in contradictions. The world of sensation, on the other hand, can be thoroughly organized and known. Through the *forms of time* and *space*, this world becomes the world of perception; and through the *categories* which organize objects it becomes the world of phenomena. The formative imagination separates the individual apparitions from the unitary coördination of sensation, and enables one to judge it and calculate it in advance. Thought gives the world of experience its law; and knowledge does not accept any other law from the real world. This principle is what is known as Kant's "Copernican act." It means that if rigorous science is to have value, the world must be—Kantian.

Criticism

Really convincing opposition to Kant has been possible only since the turn of the century. His premisses are now found to be inaccurate, and the proofs which he established upon them are therefore untenable. We know now that his "Copernican" reversal of the picture of the universe formed

by mankind has not been successful. The knowable world does not depend upon science; but science does depend upon the world.

For science simply does not contain so many "synthetic judgments *a priori*" as Kant was, in his time, legitimately permitted to assume. It is best served, as Hume declared, when its proponents put forth modest claims. Kant's question, "What must we say of the world if science is to be justified and to be undertaken in accord with reason?"—can still be answered, but not in Kantian terms.

Elementary "sensation atoms" are not facts revealed by observation, but ideal objects. Similarly the "chaos of sensation" is merely a hypothesis, and the elements of geometry have their origin in experience. Scientists like Gauss say that these statements cannot now be denied without recourse to mere stubborn stupidity. Furthermore, geometrical judgments are not deduced from intuition. The figures used in geometry are merely illustrations which go hand in hand with numerical proportions and apply to all objects indicated. The judgments of geometry extend far beyond the area of sense perception, and algebraic judgments extend still farther. No intuition carries out its intention; but the ideal objects, built up step by step independently of intuition, corroborate judgments which have for their goal something imperceptible and which are, therefore, not meaningless. Not all mathematical entities are created, but many are simply found. Our knowledge of relations is often due to acts which are not order-establishing, but perceptive. Objective and subjective shapes coalesce, adapt themselves to one another. Indeed, shape is the borderland between objective and subjective reality. Like many shapes, many thoughts are receptive in character—that is, they do not determine but are determined by objects. Real and ideal sciences are differentiated accordingly. Kant overlooked

the difference between them, as was hardly avoidable in his time. Finally, sensations cannot be reduced to order by thought, any more than things themselves can be. That thoughts, like sensations, are "mine," does not prove that my thoughts can lay down laws for my sensations. Indeed it is not discernible how they could "come to do that" any more than they can legislate in the realm of things.

His premisses having been undermined, Kant's basic arguments have also collapsed. A subject face to face with manifold objects can choose between manifold syntheses, without necessarily eliminating thought. Thinking supplies relations and also shapes, but it does not supply all shapes. Perception of formed sensation need not be thought. The notion of the unity of perception space must, moreover, be abandoned entirely. Geometry knows spaces that are very different in structure. The various sensory spaces (visual space and tactual space, for instance) are not identical. The spaces in which masses move depend for their form, it seems, upon the speed of the movement. Only experience can reveal in which of the geometrical spatial areas we permit our clocks to run or fire our cannon.

Time

Again, the times of mass movement are now measured without reference to the passing of experience, which in its turn is not dependent upon moving masses. Everywhere, over and above the applications of ideal calculations, experience decides about reality. Everywhere the event calculated and the event observed are seen to differ; everywhere comparison of the ideal with the real completes the measuring formulæ of calculation, which are viewed as merely approximate. To a far greater extent than Kant [15] be-

[15] To these aspects of contemporary criticism of Kant, we shall return in the final chapter of this book.

lieved, the phrase "as far as is known today" must serve as a prelude to the expression of scientific opinion. Moreover, the conservation of mass is bound up with definite rates of motion, so that a statement regarding it cannot be made *a priori.* Time and space, therefore, are not independent of motion and mass. Pertinent thoughts may also find their complements in reality not perceived but imperceptible. In short, Kant's theory does not apply to reality, because reality never wholly coincides with ideal theories of the world.

The Value of Kantian Thought

Despite these objections, Kantian thought remains permanently valuable. Even though it is impossible to build up a hypothesis *a priori,* independently of experience, as arbitrarily as he fancied, it nevertheless remains true that philosophy cannot dispense with the creation of ideal worlds if it wishes, through comparisons, to know reality. Thus the solidarity of Kant's system also abides. A new critical realism, which we can conceive of as being developed in the future, will regard the "transcendental" question—"What are the premisses which are indispensable to science if it wishes to be accurate in its judgments?"—of the very greatest importance. These premisses, which from a critical point of view, are inevitable, will of course have to be viewed not as subjective *a priori* judgments but as the primary realities of the objective world. The Kantian heritage has already been fruitfully developed by several recent mathematicians, students of nature and critical realists. It is eminently desirable that these should combine with Kantian devotion to thought the earnestness and depth of the Kantian faith. Only so will they ultimately join hands with classical philosophic tradition and temper as well as en-

noble the sternness of his ethical mandate through recourse to the inheritance of love. Realism of this kind would eventually gather also the fruits which ripened in the vast garden of German Romantic philosophy.

CHAPTER VI

ROMANTICISM IN PHILOSOPHY

1. Fichte, Schelling and Others

German philosophy, following the lead of Kant, went down a road that led from pantheism to theism, but was unable to reach a conclusive goal. To a considerable extent it was governed by what is termed the "Romantic Spirit"; and where this had autocratic sway, the catastrophe of modern personality was completed. In turn the catastrophe which overtook Romanticism itself completed the anarchy of what is usually termed "modern thinking." As the work of the romantics withered, another form of philosophy was about to appear.

In a way that calls to mind antique civilization, the modern spirit anticipated its finale with tremendous concluding systems of thought. Schelling is a modern Plotinos; Hegel is a new Proclos. Prior to them poetry appeared upon the scene with gigantic myths; and as it enlarged its philosophical content, it threw its own wavering light upon the mighty shapes of thinkers' theories. Herder,[1] following Leibnitz, was led by his serene faith to find all beauty in a preordained universal harmony; and in something of

[1] See page 372.

Note: Anyone who cares to pursue the subject matter of this chapter further may consult: Max Ettlinger's *Geschichte der Philosophie von der Romantik bis zur Gegenwart;* J. T. Merz's *History of European Thought in the Nineteenth Century;* J. Royce's *Lectures on Modern Idealism;* and J. B. Baillié's *Idealistic Movement of Thought in the Nineteenth Century.*

Leibnitzian spirit he sought justice for all separate peoples, and adapted their specific treasures to his own personality. Schiller,[2] though attracted to Shaftesbury, found in Kant the man of his choice; and Goethe was, as we shall see, no less definite in his philosophical affiliations. Later on Wagner would link hands with Schopenhauer, Hebbel with Hegel, Friedrich Schlegel with Schelling, until in Nietzsche's work poetic energy and philosophic art would be present in almost equal proportions.

Schiller

At first the foreign philosophical substance had almost a poisonous effect upon poetry. Schiller's tragedy gained something from the great authority of Kant, but lost more. It was a gain in strength of outline, a loss in the sense of content. Instead of seeking the source of tragedy in the abiding self-will of a great personality, Schiller laid stress upon a single deed which disobeyed the categorical imperative. The Maid of Orleans, scandalizing the world by her existence, is truly a tragic figure: because she is greater than her time, she dies at its hands, defending her work and character. Schiller's poetic additions to her story, as they enter into his drama, are lamentable offenses against tragic truth; and for them the influence of Kant, poorly digested it is true, is responsible. Nevertheless Schiller enriched the narrow Kantian ethics. To him free personality, ripening through morality and responsibility, is a great reality. Knowing the loftiness of the moral mandate, this personality increases its affection for virtue; and the sternness of duty does not exclude love for the noble task to be accomplished. Schiller's art therefore became, as was inevitable, too pedagogical in character. He made a noticeable *effort*

[2] Friedrich von Schiller (1759-1805), one of Germany's supremely great poets, was also a student of æsthetic and ethical problems.

to induce that ennobling effect that ought to flow *spontaneously* from poetry. But he was really a master and never sought to gain through art a knowledge of the world —knowledge which the genius of art is powerless to give. It is characteristic of genuine poets that they are not misled by theories of philosophy which tend to estrange them from the inner reality of the world. They are also not forgetful of the fact that something of the primal nature of the universe gleams through the comely shape of their work. If they lost faith in this, art would be an untruth to them—a "reflection of a reflection," in the Platonic sense.

That the roots of the Romantic movement must be sought in Kant[3] will surprise only those who have never observed the artistic structure of his dialectical system. The strict trinity of his groups of categories, as well as the polaric antithesis between contradictory comparison concepts (unity —plurality, harmony-contradiction), is the basis of the rhythm of Romantic dialectic methods.

Fichte

Johann Gottlieb Fichte's[4] paraphrase of the Kantian system of reason merely effects a firmer presentation of the

[3] See Webb's *Religious Thought in the Oxford Movement.*

[4] Johann Gottlieb Fichte (1762-1814) was a thinker in whom Germans saw reflected some of the best characteristics of their race. Poor, of humble birth, and of that heroic cast of mind which prefers to stand and do battle rather than compromise with a cherished conviction, Fichte rose to be professor in the University of Jena at a time (1794) when that institution was the scene of great cultural enthusiasm. He was forced to give up his post as a result of a conflict of ideas, but secured a similar position at the new University of Berlin. Here he rendered great patriotic service during an era of struggle for freedom. His more important works include: *Versuch einer Kritik aller Offenbarung,* which discussed religion in a manner so reminiscent of Kant that it was at first held to be that philosopher's work; *Grundlage der gesammten Wissenschaftslehre,* an analysis of knowledge which the author revised many times; and *Reden an die Deutsche*

same thing. Kant's central concept is the ego of synthesis —the ego concerning whose acts all is said, but concerning whose nature nothing can be said, the ego which builds an ideal world round about itself. Kant went farther than he should have gone (Fichte declared) when he said there were "things-in-themselves" which cause sensations; for if this were so, there would exist a causality which could not be restricted to the realm of phenomena. The ideative ego, therefore, must also consider sensations non-ego. Just as geometry does not produce points, equally little does the ego produce real sensations. It merely finds and accepts them. Then, in a manner natural enough, not merely points but also sensations and even the ego can be transplanted into ideal worlds. I know about myself and assume myself; and next I posit sensations as apart from myself (non-ego). We may note that both these Fichtean operations are possible as ideations after some experience has been gained. But he, the follower of Kant, maintains they are prior to all experience. That, of course, is romantic poetry about the world—an agnostic attack upon truth. Mystical consciousness is interpreted as esoteric knowledge. Since Fichte's ego which thinks truth is only one of all the beings endowed with reason, he describes individual thinkers as "divisible ego"—or, to use momentarily his own dark language, "the ego posits in opposition to itself a divisible non-ego within the divisible ego." Round about every being endowed with reason there exists a space, and to it there is proper a function of drawing boundaries.

Fichte sought to enfold the Kantian categories dialectically out of the ego-knowledge, only that he added the notion of transverse dependency from a pseudo-Aristotelian "table of judgments." The ego which thinks itself is the

Nation, patriotic addresses, philosophical in character, to his countrymen. For a discussion of his work see: H. Heimsoeth's *Fichte.*

true reality; and so if it thinks non-ego, the category of negation is established. But since the ego is circumscribed by the non-ego, it also knows itself theoretically through the category of limitation. In practice the ego, for its part, limits the entire world of the non-ego. Both, therefore, exist in a relation of constantly interchanging effect. Inside a limited area the ego is operative as a substance. Briefly summarized, Fichte's achievement was to have isolated the dialectic derivation of the system, as outlined by Kant, and so to have reasoned even more arbitrarily and artificially than his master did.

The assumption that the ideal world planned by the constructive thinker is identical with reality as it is, may be termed the origin of that darkness in Fichte's philosophy (which has sometimes been spoken of ironically as being clear as daylight) which utterly baffles elucidation. Fichte himself had realized that several different ideal pictures of the world were possible. For his part, he decided to choose between Kant and Spinoza; and the manner in which he arrived at his choice is worthy of note. When anxious meditation had proved inconclusive, the voice of conscience spoke for Kant, the man who respected wholesome deeds. Fichte could not accept the idea that he was a liberty-less slave of a cosmic machine, and therefore turned away from pantheism.

Romantic Art

If one can see the poetic inlay concealed within Fichte's philosophy, its heavy darkness will be mitigated almost immediately. Friedrich Schlegel [5] may help us here. The

[5] Friedrich Schlegel (1772-1829) was perhaps the chief among those German romantics who came into the Catholic Church as converts. Born in Hannover, he worked for some time as a teacher and lecturer, then went to Vienna where he thundered against the ambitions of Napoleon. Best of all

ironic artist, he says, reflects upon himself and finds no other foundation for beauty excepting his own resolve to create—which is Fichte's principle, "the ego posits itself." The artist also creates a work according to his whim and mood, without seeking to develop and explain an exact image of the world,—which is Fichte's principle, "the ego posits opposite itself a non-ego." Unhampered, the artist sets before his spectators of many kinds an arbitrary variety of shapes —which is Fichte's principle, "the ego posits opposite itself within the divisible ego a divisible non-ego." By reason of his ironical attitude towards form and content, the artist proves himself master of the work of art; and by reason of his ironical attitude toward the spectators, he proves himself their master. Because of the mixture and chaos of his forms he reveals himself, however, a romantic artist.

The world of art knows, nevertheless, that it is impossible to subject metaphysical content to irony without incurring a penalty. A sublime drama becomes an empty pastime, the poetic form degenerates into a plot. The romantic man sickens with a kind of consumption of personality. Schlegel himself took refuge in realities and abiding values, thus making possible an entirely different version of the Fichtean principles: God rests within Himself; God creates the world; God permits finite pictures of the world to appear in finite souls. In this sense the three aspects of the Fichtean principle are certainly suggestive. And with this interpretation the aging Fichte concerned himself more and more earnestly. Although he had at first misapplied the name of God as a synonym for the cosmic order, after the fashion of Spinoza, he later developed his ethical teaching into a history of philosophy. The road of human freedom, he held, leads from primal innocence through consummated sinful-

his books, perhaps, are those which deal with literature; but his *Vorlesungen über neuere Geschichte* and *Die Philosophie des Lebens* are important.

ness to responsibility. His son, I. H. Fichte,[6] went farther still in the direction of the Christian solution of man's problem. He thus revealed the true significance of idealism, which speaks of the things of this present world as if they were already transfigured, and of human knowledge as if it were already in possession of the vision of the Divine originals. Friedrich Schlegel, for his part, went from Spinoza to monotheism, along a road of honest self-reflection. Out of the æsthetic pseudo-Christianity of the romantics, the firm outlines of genuine Christian religion began to appear.

Schelling

If a real world, devised and perceived, is to hover in the presence of a governing reason and to derive its permanence from eternal thought, that reason and thought must be God's. Then, however, it is no longer appropriate to weave the apparition of this world out of sensations, all too much in the manner of a dream. The outer world must be conceived of both as self-sustained and as emanating from an idea. Every thought concerning that world must be directed over and beyond it to the Spirit which is its primal cause. No thought concerning the soul ought to forget that "nature" out of which it comes, like a flash out of darkness, to form the body. Thus reasoned Friedrich Wilhelm Schelling,[7] whom Spinoza's "spirit-inhabited" nature

[6] Immanuel Fichte (1796-1879), theist and idealist, was overshadowed by the fame of his father.

[7] Friedrich Wilhelm Schelling (1775-1854) was a romantic artist among philosophers. After receiving a thorough education, he taught at various German universities, including Jena, Erlangen and Munich. One of the least lucid of all thinkers, he offered the public many a book it was totally at a loss to comprehend. The easiest to read and not the least important is *Vorlesungen über die Methode des akademischen Studiums.* His more specifically art books—*Philosophie der Kunst, Über das Verhältnis der bildenden Künste zur Natur*—have been very influential. For comment see George Mehlis, *Die deutsche Romantik.*

fascinated so much more than it did Fichte. But his intellectual fire melted the Platonically geometrical cast of the pantheistic system. He considered both nature and the spirit creative. When the eternal Spirit, possessing a knowledge of all Ideas, contemplates and thinks Nature, it transforms this Nature into pure Reality. The finite soul also is able to create—to build round about itself an ideal world, wholly comparable with reality. Creative knowledge of this sort emanates from the work of art. Shakespeare can teach us more about the mysteries of the soul (Schelling declared) than any text-book designed to rationalize psychology.

Schelling's intellectual contemplation sought to rediscover in the outer world the creative maturing of the Ideas. Merely rational observation is content with enumerating energies alien to one another. The philosophic seer, however, finds will in gravity, knowledge in light. He discerns the identity of electricity and personal magnetism. In the polaric electrical currents, which constantly run away from each other to meet again in unity, he beholds the basic activity of the ego, which, as it reflects, divides itself into spectator and that which is considered, and yet ultimately resolves into unity. In the neural processes, which convey psychical life, the philosopher detects electrical energy. "Is not the kernel of nature in the heart of man?" is a phrase from Goethe which sums up the convictions of Schelling. For him the poetry of mankind is the self-revelation of the World-Soul. The development of the great myths is the achievement of consciousness by God, conceived of gnostically. The World-Soul first discovers itself and its work in wood and stone, then in animals and plants, then again in man and in Christ. That ripens in time which is eternally unfolding its nature.

In Schelling the destiny of romantic-idealistic Gnosticism was fulfilled. A seraph standing before the face of

God would, no doubt, see the world expand eternally like a blossoming flower. But in the case of finite human thinkers, such lofty speculative ambitions end in giddy descents to intellectual chaos. Nobody will deny that the intuitions of genius are useful in the search for truth. Romantic zeal, however, scoffed at the claim that such intuitions ought to be examined carefully by temperate reason. In the end, of course, the objections made by the natural scientists to Schelling's cloudy physics have prevailed. Art is not knowledge. All attempts to assign a "cosmic fate" to God, and to assume that human culture can evolve the wisdom of Revelation from within itself, mistake the journey of mankind towards God for a fanciful "transition-period" of a "slumbering world-spirit" to a "becoming-God." Schelling, the Romantic man, overvalued art and so robbed its figures of their blood. He accepted his ideas as wholly adequate pictures of the world; and in doing so he was like nothing so much as a man trying to grow wings. Nevertheless his work is magnificent when it is seen as an anticipation of the vision that shall be in another world. His insight into the progress of mankind through varied myths toward Revelation is impressive; and his steady pursuance of a trend of thought which led from Spinoza's pantheism to a mysticism of the Sacred Spirit is creative in character. Schelling's stormy zeal prepared the way for similar hypotheses at once more reasonable and more modest. His cosmic poem is the most profoundly significant of all gnostic theogonic myths. It has moments of sublime beauty that touch the soul with genuine neo-Platonic awe. But in it there is the sickness of romantic perversion, which confuses what is beautiful with what is holy. Religion becomes a dream for philosophy to interpret . . . as if mere thought were redemptive.

Goethe [8]

The intuition of genius, even though its scope be not to consider and clarify the ideas which germinate in a brain more than usually fertile, is a genuine conquering force in the hands of a true investigator. The first concern of a great poet is not, of course, with knowledge. His theoretic views are, therefore, only of occasional value in the stricter sciences. Thus Goethe's fruitful efforts in the scientific domain might easily be overestimated. His discoveries in anatomy and botany, as well as his anticipation of the psycho-physical theory of color, have only a relative value. It remains evident that he sought, through physical speculation, to leap across toilsome mathematical ideations and come to grips directly with reality. At this he did not succeed, naturally enough, even if his philosophical demonstration of the fact that sensation involves differing degrees of subjectivity is important. There is nothing unreasonable in ascribing color to extended surfaces as their property. The "nighttime view," as Fechner [9] has termed it, of physics is also only an artificial simplification, untenable from the point of view of metaphysics. Goethe, moreover, shared Schelling's view of light. And if it is true of Schelling that what is termed "exact imagination" is not properly a method of investigation, the same thing must be said of Goethe.

These criticisms do not, let us repeat, destroy the value of those ideas which genius arrives at in a flash. Schelling

[8] Johann Wolfgang von Goethe (1749-1832), Germany's greatest poet, was also a philosopher and a student of nature.

[9] Gustav Theodor Fechner (1801-1887), a German physicist and physician, was the author of two important books of philosophical autobiography. In one of these, *Die Tagesansicht gegenüber der Nachtansicht,* he described his going from the "nighttime view" of materialism to the "daytime view" of his own religious philosophy.

is very much akin to Goethe, who was also influenced by Spinoza. Nevertheless Goethe's dislike of the dissection in ideative and logical analyses, as well as his resolute defense of the spirit's unity, proved antagonistic (even too impetuously so) to Spinoza's method. The great poet's concept of "governing nature" is imbued with a creative energy reminiscent of Schelling. The mysterious kinship of all life, the fact that the plant can be recognized again in its first leaf,—these ideas have little in common with Spinoza. Goethe also abhorred nothing so much as Spinoza's conception of perfect happiness: "to trickle out into nothingness." His supreme treasure is the personality—form realized—which develops as it grows. Personal immortality, the spiritual permanence of the personality, which Goethe believed in with a conviction that occasionally seems almost spiritistic, was obviously wholly alien to Spinoza's mind. Finally, Goethe's ethics differed radically from Spinoza's. According to the Hebrew sage, the drama of error and repentance involves an unnecessary duplication of sorrow. But Faust is precisely such a drama, and is built entirely upon personality rather than upon metaphysics. As Goethe aged and acquired romantic irony, the view of life expressed in his play altered; but neither time nor deepening poetic power sundered the hero's personality, which unfolded within itself the fate of the world. Faust changes, but only to grow richer; and Gretchen's religion of love triumphs over his pantheistic creed. Nevertheless this religion is really only an æsthetic pastime, reminding us of Schelling's philosophy. No sophisticated person can take the close of *Faust* seriously. We may add that nothing reveals the great play's antagonism to Spinoza better than does a very curious error made by Ernst Haeckel. In order to prove Goethe's indebtedness to pantheistic doctrine, he cited the words, "We must all complete the course of our existence

as the great, eternal, iron Laws command,"—without noting that the poet goes on to say, "Only man can accomplish the impossible; he it is who chooses and judges."

2. The Hegelian Synthesis

Confidence in revolutionary "reason" finally came to a point where reason was voted utterly untrustworthy. In a mood of skeptical irony, the subjective romantic turned thought into an amusing, spirited pantomime. By doing this he began, within his own limited circle, the process of destroying the modern individualistic principle. The greatness of Schelling may be defined by saying that he opposed with the authority of genius the decadent tendencies of extreme subjectivism, and sought to arrive at truth rather than at witty *bon mots*. And like Schelling, Georg Wilhelm Friedrich Hegel [10] set out upon the road that leads from Spinoza's pantheism to God—from "substance" to "subject," to employ his own shadowy language. In addition he undertook the titanic venture of restoring contact with

[10] Georg Wilhelm Friedrich Hegel (1770-1831) was certainly one of the most extraordinary of modern men, even though there was little in his life to interfere with the even tenor of philosophic speculation. As a university student, he numbered among his friends Schelling and the poet Hölderlin. He himself was at first an enthusiastic supporter of the views of Kant and Rousseau; but after some years of teaching and an appointment as professor in the University of Jena, he began to develop his own vast system. *Phänomenologie des Geistes,* his first work, was truly remarkable and, in view of Hegel's previous development, revolutionary. Portions of his other work have been translated as *The Logic of Hegel* and *Hegel's Philosophy of Mind.* During his last years he lived in Berlin, where he was especially influential as a philosopher of religion and history. The continued interest in his achievement is manifested by the publication (1927) of a complete edition of his writings which is far superior to the one issued immediately after his death.

The present book offers no complete analysis of Hegel's system. Those interested in examining the subject more thoroughly may consult monographs by W. Dilthey, F. Rosenzweig, and A. Brunswig; and the general *Geschichte der neueren Philosophie,* By W. Windelband.

tradition in philosophy. Even though this venture was necessarily beyond the powers of any individual thinker, Hegel's courageous attempt suffices to ensure his lasting fame. He holds his rank with Aristotle and Leibnitz.

The categories of the Hegelian system are, it was assumed by their author, the abiding fundamental ideas of all historic philosophies. With a clear vision for what is essential and an enormous knowledge of what is genuine, he thought through once again the ideas of the past—and they lived. His "pioneer effort" cannot be accepted as final; but he was really a pioneer, appearing after a long period of anarchy. Accordingly the present book, though differing widely from Hegel's great work, owes him a debt of thanks. No detailed discussion of his system can be attempted here, but we may profitably begin a brief consideration of it by saying that the collapse of romantic culture into anarchy postponed the date when its effect was fully appreciated. A community of the spirit alone can finish what Hegel, an individual quite alone and unjustly ignored, could not bring to a satisfactory conclusion. Today the philosophic systems which followed his seem like waste sand scattered at the base of the Sphinx. No task could prove more worth while than a reevaluation of his doctrine.

Dialectic

A student of Hegel may profitably start with some reflection upon the nature of his dialectic. His method requires that one accept no judgment as true unless one has investigated the arguments in favor of the judgment contradictorily opposed to it, together with their consequences. It demands that this same procedure be followed with reference to every newly acquired judgment. Hegel was firmly convinced that experience of events and processes which have

a certain *value* immediately forces one to confront contradictory judgments, between which a compromise must be effected. Study of the matter in hand will then show (he held) in what respects *both* judgments contain exaggerations. This opposition called forth by a given state of affairs cannot be contradictory in character. A *particular kind* of incompatibility is, therefore, at the bottom of the matter (a dissonance which cannot be disposed of with the usual criticism that Hegel confused difference with opposition). Polaric oppositions exist, for example, on the same scale between the two extremes in a given instance—e.g., between "cold" and "warm." The judgment, "A needle is cold" is incompatible with the judgment, "A needle is warm (not-cold)." But it would be erroneous to conclude from this that "Warm and cold cannot be sensed at the same time." A thing may seem cold to my right hand and warm to my left. A thing may, without having been subjected to any change, have a point of warmth which induces the sensation "warm" and a point of cold which induces the sensation "cold." A warm and a cold thing may have such a simultaneous effect that one will feel both hot and cold. Hot and cold can, indeed, be felt at the same time as easily as sorrow and joy can be felt at the same time. One may be, as the Latin phrase has it, *in tristitia hilaris.* One can take pleasure in an occurrence, even though one's basic mood may be mournful.

The Highest Good

The incompatible judgments about hot or cold things, lead, therefore, to a clarifying determination of whether a thing is hot or cold *in itself*, or hot or cold with reference to an *ego.* The judgment *in tristitia hilaris* calls for an explanation of what is surfacy and what deeper, of what is central and what peripheral, of what is interior and what

exterior. Such "compatible oppositions" and polaric opposites have always disturbed human thinking. That is why Hegel was interested in considering them. And he found that precisely in our knowledge of the Highest Good the contradictions of this sort were very numerous and appeared to be inexplicable antimonies. To human speculation, Omniscience seems to limit Omnipotence, and therefore to render it impossible: it appears to prevent that from being accomplished which might easily be desired by God. But in the Divine nature these antinomies are reconciled.

According to Hegel, thought about the nature of God is the only matter worthy of philosophy. He conceives of it as seeking to think no thing or event without reflecting upon the Divine idea which gleams through that thing or event. For the fact that philosophic activity always reckons with both polaric extremes is what dissipates the one-sided and exaggerated judgments of the separate sciences, and clears up matters it itself has not thought through. Reality is always dualistic. God and world, body and soul, are separated from each other by wide gulfs. The methods of physiology and psychology therefore proceed to describe events as if it were possible to judge the body without saying anything about the soul and vice versa. The separate sciences, compared with one another, present a great many oppositions which need to be cleared up. To the physiologist experiences are primarily by-products of body processes; to the psychologist what goes on in the brain is the last thing of which self-experience could become aware. These oppositions are arresting not only because the separate sciences are pursued side by side in anarchical disorder. If one were to seek a complete description of actuality, each science would need the others; and it happens that this "complete description" is exactly what philosophy is seeking. Chemical processes are the causes of the unity and preserva-

tion of the body, declares one kind of investigation; the soul is the cause of them, says another kind. Both are depending upon incomplete reasoning processes.

Philosophic Syntheses

In so far as specialized philosophical systems are concerned, the same situation exists. For them also polaric opposites are determining factors. Materialism and spiritualism, idealism and positivism, exclude each other. Compatibility may nevertheless be arrived at (thought Hegel) by removing one-sided views from all the systems. History gives us the example, because in it the polaric extremes exchange positions. He who was master becomes the slave. Crises in development completely reverse the status of peoples. Yesterday men praised Jacobin freedom, today some cheer an autocrat. For a man of Hegel's temperament, this "universal antithesis" was heightened for a singular reason. We say (he observed) that if warm and cold change, if they follow one another in the order of time, then there cannot be any serious talk of conflict between them. But it is unessential to the pertinence of a judgment that one needs time in order to arrive at it. Whether one has used much or little time to understand a doctrinal assertion, one sees, in the final analysis, the essence of its meaning at a glance. In a perfect spirit all extreme judgments, to which reality forces us to take recourse, would be reconciled. This spirit, being apart from time, would coalesce all one-sided views into harmony, though it would know them and keep them in mind.

For these various one-sided judgments are not irrational. They throw a surprising light upon many sequences of relations. The mystical belief that if the tree of the soul bring forth good fruit, no phase of blossoming or withering is in vain or has not taken place in the sight of God, deeply in-

fluenced Hegel. He could not forget that all acts of the Divine wisdom and will, being apart from time, leave the Eternal Spirit tranquil and unchanged. His faith in the value of philosophy was based on the fact that no honest effort or thought fails to arrive at rest and security in God. And so he felt that the oppositions which challenge us in things as they are arrive at a unity which is also diversity in the shelter of living truth. Nor is the human soul, which has the courage of truth and steadfastness amidst the warring of polaric opposites, forgotten there. Restlessly active, the thinking soul gains for itself, in the task of harmonizing one-sided judgments and out of the unavoidable attempts at making approximately correct theoretical explanations, a mystical insight into Reality as it is. The soul is Hegel's ceaselessly self-moving, self-knowing essential "concept." To him "I" and "concept," "God" and "idea," are synonymous.

Cosmic Processes

Without the being of God (Hegel reasoned) the world would be nothing; out of this nothing, therefore, the world *becomes*. Nature stirs, infinite, dualized into polaric tensions. All equalizations of energy are harmonizations of energies separated from one another polarically. In every measurable exchange of energy, the active substance maintains itself. An arbitrary increase of quantitative changes in one direction is impossible, because the quantitative will become qualitative change. Heating does not lead to further and further rises in temperature, but to an alteration of condition. Only in the living organism does the same nature abide identical despite all deteriorating and constructive, all separating and component occurrences. Nevertheless it is in the soul alone that *conscious identity* amid the constantly altering stream of experience is real-

ized, despite all changes of polarity. The subject is therefore the identical substance, which knows itself, and understands itself and its equals. These categories (*triad*, in Hegelian diction)—maturing, becoming, self-enriching being; identical nature in the midst of all causal equalizations of energy; soul which understands itself—are the fundamental notions of Hegel's logic.

His dialectical view of nature fed—like Aristotle's philosophy—upon the facts of life. In this is to be found that sexual polarity and tension, from the equalization of which the highly organic nature derives renewal of itself. Though it is subject to all physical and chemical laws, the identity of the body form nevertheless preserves itself through three directional processes peculiar to it: growth, recuperation and reproduction. A complete description of personality can likewise be achieved most competently (Hegel believed) through dialectical presentation. It so happens that personality appears as a late and mature result of the whole cosmic development. Astrophysical, geological, biochemical processes had necessarily to occur prior to its appearance. In this portion of his theory Hegel anticipated the doctrine of evolution, without, however, viewing it with any bias. It led him to conclude that the whole world, with its wealth of qualities, must be understood as the result of the development of ideas entertained by a personality. All light would be darkness, were there no seeing eye. A judgment holds good only for a personality, the outer world is real only for a personality. The final result of the world order is, therefore, also the first premiss of that order. This primary Personality, for which all the world is first made real, is, however, not the finite soul of man. As it gains in depth, human knowledge finds its way from the hypothesis, "All the world is what I see," to the truth, "The spirit of God is the cause of the world." The way in which Hegel presented the ap-

proach of the knowing soul to the mystery of the Divine Spirit is very impressive and thoughtful.

Of this his remarkable doctrine of phenomena is a proof. Here also one may see clearly how vast an accumulation of experience was at his command. From the bright surface of the facts presented in sensation, the quest of philosophy (says Hegel) descends to deeper realms. Things that abide are selected from the colorful tide of the images of perception. Reason, however, transcends sense certainty and calculates the existence of invisible forces as being the basic causes of the world of appearance. Then personality, grown capable of self-consciousness, dominates these forces as a master when it realizes that patient and devoted labor alone will bring the right view. When the earnest thinker is misled by stoical self-certainty, he succumbs to doubt. He admits that the things and energies of the present life do not teach him how to understand and rise superior to the world. For in all truth (declares Hegel) the origin and goal of the world are transcendental in character. Truth has revealed Itself in the Man who, sharing every sorrow of the world, sacrificed all that was proper to Himself and so became, on the Cross, purely God, as He is mystically and beyond the realm of time.

Now reason understands the necessity for a complete description of the world as the work of God. Now is made clear the development of nature to the point of the organic harmonizing of the extremes of polaric tension. Now personality takes cognizance of itself as the active identical substance. To begin with, it grasps external peculiarities, individualized physiognomy. If its actions are dictated by pleasure, it will succumb to implacable fate. If it obeys only the law that is in the heart, it will end in insanity and darkness of soul—will live like a mere animal, ignorant of its own dignity. Only when it acts according to reason and

established law, does it realize its human nobility. The genuine freedom of communities prospers only in the light of virtuous custom. Reasoned responsibility and upright atonement for error overcome the horrors of guilt and the goal of fate. Unbridled societies collapse when they cast off morality on a specious pretense of "enlightenment." Victorious states, grown reflective, codify their customs into law. When reason suffers its power to expand into unrestricted rationalism, it destroys tradition and weakens itself as well as personality. Then the terrors of anarchy, of liberty grown absolute, drive mankind to self-reflection. It understands once more the value of society governed by reason, of marriage and of government.

Elevation

Historically speaking, the race as well as the individual experiences the process of elevation from the slough of sense certainty to knowledge of God. The lot of the great individual during the crises of history is tragic. He is superior to his time, because he clarifies the existing oppositions from which it suffers. The time, however, upholds the authority of opinion not thought through and so overthrows the genius, whose governing idea nevertheless proves victorious in the end. Socrates demonstrated to the Athenians that true freedom flows from morals established by reason. The Athenians, however, thought of reason only as a way the Sophists had of breaking the moral law. Therefore they gave the cup of poison to one whose idea conquered the world. In a similar fashion, Hegel interpreted reverentially the greatest of tragedies, Christ's passion and death.

Wisely counseled by the trend of history, Hegel saw through the vanity of arrogant reason and of molten æsthetic feeling. The bonds which reason has established as marriage, law and the state set for mankind a worthy

goal, to the attainment of which everyone may dedicate his life with the assurance that it will be enriched. It is marriage which makes free, not loose amorousness; and the romantic anarchist is the slave of his erring instincts. In his estimate of pain Hegel was likewise great. He showered majestic scorn upon callow pleasure-seeking, upon the ideal of solid comfort, without tumbling into the errors of Hindu supersensitiveness to suffering. The more delicately organized a creature is, he pointed out, the more intensely it can suffer. It is, therefore, man's privilege that he may suffer most. Ethics must seek not to minimize pain but to overcome the world.

It is not extraordinary that a man of Hegel's temper of mind should have been deeply appreciative of high art. According to his view, creative art in all ages has a metaphysical and religious content, from which its greatness is derived. This spiritual origin is made luminous—in a manner that has nothing in common with pedagogy—in unique, unrepeatable, thoroughly formed shapes. The formal structure of symbolic art points explainingly to a distant metaphysical order and power: the towers of the cathedral indicate, its flaming windows glow with, heaven. The poise of classical art, preserving the balance between form and content, indicates the essential individuality of each person, resting within itself and bearing its inescapable sorrows. The melancholy of an unsolved terrestrial riddle plays about the lips of the joyful Grecian marbles. Romantic painting imprisoned within the unshackled naturalness of its human shapes a laughter above earth and a peace that is redemption. The stylistic form of Raphael transfigured the fondness of a mother for her child with the luminousness of supernatural love; and it appeals to us, therefore, as original nature reconquered. Deeper and freer of accident than history, tragedy reveals the sorrow, the victory and the greatness of

unbending human destiny. In the downfall of Antigone, the law of God triumphs over the statute of man, even though the judgment rendered by Kreon is just. The poetic myths of humanity veiled the religious expectation of the human race and prepared the way for Revelation. The mysterious reflection and aspiration of the prophetic artists finds its fulfillment in the true and revealed religion of Christianity.

Religion and Philosophy

The truth of this last principle Hegel did not set forth with all the effectiveness possible. To him religion was truth garbed in mystical raiment. He held that philosophy alone makes clear the supersensual concepts of religion; and his all too theoretic and gnostic mind misunderstood the transfiguring, energizing power of grace. Great though Hegel's realization that the real origin of nature must be sought in the ideas of God was, the primary assumption upon which his system rests—the assumption that man is able to read those ideas with the help of philosophic method —was far too optimistic to be correct. He attributes seraphic intelligence to earth-bound mankind. Those who like Hegel have gathered vast stores of experience and assimilated them easily forget that without recourse to the trail of experience nobody would arrive at philosophic thought. If he had understood the later Hellenistic time as well as he did classical antiquity, he would have borrowed more generously still from tradition.

But it was inevitable that any one man should find the task of tying the threads of the modern age into the lost weave of the past too great. That work must be prepared for by painful experience, just as during later Hellenism the approach to grace was prepared for. As an heir to the modern spirit and as an intellectual grandson of Kant,

Hegel did not succeed in growing beyond the gnostic stage. To these limitations we must attribute the manifest artificialities in his dialectic method, the bold assumptions of his philosophy of nature, his extravagant evaluation of the state, his narrow estimate of the Reformation (which grouped the whole world round the center of Prussia), and the shadowiness of his idea of God. Though Hegel was unquestionably near to a theistic solution, holding as he did that spirit, idea and subject (the famous triad) are of equal importance, he did not make it clear whether what he termed the "sending forth" (*Entlassung*) of the world is to be understood as creation or as emanation. Though he earnestly emphasized the timelessness of God, he nevertheless conceived of Divinity (in a manner similar to Erigena and Schelling) as taking a way towards itself through the world —which can be interpreted in a pantheistic sense but need not be so explained. Here we encounter darknesses, which no amount of respect for Hegel's gifts should make us deny. These darknesses set his disciples at loggerheads and brought down the catastrophe of Romanticism.

3. The Romantic Catastrophe

Schelling's genius, Goethe's reflective tranquillity, Hegel's reconquest of objectivity—these might have renewed the face of the philosophical earth had they shared the constructive energies of life-giving tradition. Here, as always in art and philosophy, there was a beautiful classic moment, but great ability soon congealed into mere artifice. The great men's disciples clasped nothing but shadows—outlines—to their bosoms. Classical art flourished with spontaneity only in England, where Hogarth,[11] Reynolds [12] and

[11] See page 359.

[12] Sir Joshua Reynolds (1723-1792), portrait painter. See W. Armstrong's *Sir Joshua Reynolds.*

Gainsborough [13] painted the fair, the noble and the prosperous. The chilly elegance of later French classicism, even the colorful softness of Prudhon,[14] were genuinely French but appear to be hiding behind masks. Clammy, sweet, cold and smooth were the stiff figures of Canova,[15] who nevertheless towered far above the contemporary baker of sculptured pastry, Thorwaldsen.[16] In Germany only a kind of philological fury remained to inherit the dictional art of Goethe.

Romantic Reaction

Romantic reaction set in everywhere, and everywhere tore off the mask-like "classical" stiffness. In bungling Germany there appeared Caspar David Friedrich,[17] in France two luminous personalities came forward in Ingres [18] and Delacroix,[19] and in England there would soon be the Pre-Raphaelites.[20] All poetry had become romantic. Then, though the time was charming and rich in men of decision, something catastrophic happened. The modern personality, wholly unhampered in its choice of goals, burned down like a candle that has melted through. The man to whom

[13] Thomas Gainsborough (1727-1788), portrait painter. See W. Armstrong's *Gainsborough.*

[14] Pierre Prudhon, one of the greatest of French classical painters. See E. de Goncourt's *Prudhon.*

[15] Antonio Canova (1757-1822) effeminate neo-classic sculptor. See A. G. Meyer's *Canova.*

[16] Albert Thorwaldsen (1770-1844), Danish sculptor.

[17] Caspar David Friedrich, romantic painter of landscapes. See Ricarda Huch, *Die Romantik.*

[18] Jean Auguste Ingres (1780-1867), French painter who was an uncompromising classicist but a master of drawing and the precursor of much modern art. See J. Momméja's *Ingres.*

[19] Ferdinand Delacroix (1799-1863), leader of the romantic movement in the French painting of his time. See M. Tourneux's *Delacroix.*

[20] The Pre-Raphaelites or the "Pre-Raphaelite Brotherhood" is the name given to a school of painting instituted by Hunt, Millais and Rossetti. This dates from 1848.

thought had become a pastime and the establishment of standards a matter of taste, succumbed to his instincts. Eager for knowledge of individuality, those who overestimated the value of the arts were scourged with alienation from reality. Ethical action was dictated with reference to æsthetic standards. That was, of course, perversion; and romantic art became anemic, while romantic culture (which derived its doctrine of man from art) sacrificed all genuine knowledge of man. The remnants of tradition melted away like fragments of ice. Beauty became eccentricity. Irony, rampant everywhere, killed the nerve of earnestness.

Collapse

The end was the collapse of those who were (in many cases, at least) the noblest, the most attractive, the most richly gifted. Anyone who terms all this accidental must assume the burden of proof for his statement. To the reflective spectator it will seem the catastrophe of subjective culture. In *Don Juan,* Byron [21] portrayed his *self*—the Hellenic spirit enslaved by the furies. Nothing could be more remote from the world than the German poet Hölderlin's [22] romantic Greece—or Keats'.[23] Heinrich von Kleist,[24] whose *Penthelisea* was a "tragedy of unbridled passion," committed suicide. Others went insane, or took laudanum. In practice there was only one possible cure for the romantic soul—restoration from within through a new insight into

[21] George Gordon, Lord Byron (1788-1824), English poet, was the author of *Don Juan,* an iconoclastic and rebellious epic little read nowadays.

[22] Johann Christian Hölderlin, author of *Hyperion,* is one of the most Attic among German poets.

[23] John Keats (1795-1821) created a matchless English vision of Greek loveliness.

[24] Heinrich von Kleist (1777-1811), one of the greatest among relatively modern German playwrights, committed suicide in a spirit of disgust over his epoch. "Penthelisea" is the queen of the Amazons, in love with her enemy Achilles.

the tradition of Love, and through reflective consideration of truth that abides and of values that are enduringly right. In Germany, Friedrich Schlegel [25] and Clemens Brentano [26] found this recipe of recuperation; in England, the healthful progress of the Oxford Movement brought the great mind of Newman [27] into affinity with Christian tradition. In France, Balzac [28] became a sturdy defender of the principles of traditional society. Chateaubriand [29] and De Maistre [30] glorified the "genius of Christianity," and set forth its beauty and its consecrated nobleness. In an Italy that was still largely classical, Manzoni [31] found his way back to the lofty spiritual highroad of his race. The later romantics, however, were consumed with *Weltschmerz*—Heinrich Heine,[32] Alfred de Musset,[33] Leopardi.[34]

[25] See page 400.

[26] Clemens Brentano (1778-1842), a poet and story-teller, came to Catholic Christianity through Romanticism.

[27] John Henry (Cardinal) Newman (1801-1890) entered the Catholic Church as a result of the Oxford Movement—a movement among Oxford scholars to restore the Anglican Church to its primitive character. As a thinker he is notable for *A Grammar of Assent* (an analysis of *the reasonableness of religious belief*), *Idea of a University* (a study of educational theory), and *Apologia pro Vita Sua* (a spiritual autobiography). See W. Ward's *Cardinal Newman* and *Last Lectures.*

[28] Honoré de Balzac (1799-1850), one of the greatest of French novelists, was convinced that Christian principles were the only safeguards of society. See F. Curtius' *Balzac.*

[29] Francois René de Chateaubriand (1768-1848), author of the *Genius of Christianity,* was the precursor of a notable lay religious revival in Catholic France. See V. Giraud's *Le Christianisme de Chateaubriand.*

[30] Joseph de Maistre (1754-1821), vigorous opponent of the principles of the French Revolution, published *Considerations sur la France* and *Du Pape.*

[31] Alessandro Manzoni (1785-1873), author of the classic novel *I Promessi Sposi,* was also a critic and theorist of notable ability.

[32] Heinrich Heine (1797-1856), melodious German-Jewish lyric poet, was also a mordant satirist and misanthropist.

[33] Alfred de Musset (1810-1857), marvelous lyric poet and also a playwright, was more than relatively neurasthenic.

[34] Giacomo Leopardi (1798-1837) was a melancholy Italian poet.

The tragedy of the modern soul, romantically diseased, was not confined to the downfall or the unbounded pessimism of a few geniuses. Romanticism itself was the final flower of a lofty culture grown weary. This culture, by reason of the excessive worth it attributed to genius, rested on the shoulders of a few unusually gifted men. This aristocracy, however, had been corrupted by irony; and when it surrendered, the whole cultural structure broke down. Never before had mankind witnessed so reckless a plunge into extreme barbarism of spirit. The close of the nineteenth century was a play of which even the spectators might be profoundly ashamed. Vast systems of thought crumbled because they were without foundations. Whole decades languished without any other philosophy than an involuntary and wholly uncreative materialism.

It is true that science upheld the rightness of its method against such attacks as those of Schelling. But the empty declamations of men like Vogt,[35] Moleschott[36] and Büchner[37] appealed in vain to that method: they could merely repeat Epicurus and prettify their oratory with badly cited fragments of scientific treatises. Then the criticism which the romantics afflicted with "cosmic woe" applied to what was excellent in the Romantic Movement hastened the approach of chaos. Schopenhauer and Haym[38] were symptoms of widespread intellectual and spiritual poverty.

[35] Karl Vogt (1817-1895), a Swiss zoologist, wrote *Physiologischen Briefen* to prove that thought bears the same relation to the brain as the gall does to the liver.

[36] Jacob Moleschott (1822-1893), professor at Heidelberg and Zürich, wrote *Kreislauf des Lebens.*

[37] Ludwig Büchner, a German physician, maintained in his *Kraft und Stoff* that energy is always combined with matter and that therefore an immaterial God could not exist.

[38] Rudolf Haym, author of *Schopenhauer,* was a prominent anti-Hegelian.

Feuerbach [39] and the left wing of the Hegelians believed they were cleverly establishing the rightness of materialism when they were merely undermining Hegel's most profound doctrine. They averred that the Invisible Spirit cannot be real since only what is perceived by the senses is real —quite as if matter itself were something essentially capable of being perceived by the senses.

Karl Marx

The most interesting testimonial to the prevalent deterioration was, however, the Socialist metaphysics of Karl Marx.[40] In this, by means of certain borrowings from Hegel, materialism was pumped into the veins of history. The dialectic process was transformed into an omnipresent causal dependency. The events of history, it was declared, involve real instinct-energies. What Hobbes had described as egoistical craving was more concretely phrased by Marx as "necessity." Industrial necessities "keep up the social movement." So long as population increases in accordance with nature, needy and impoverished men will always have to sell their labor in order to maintain their existence. There are always more human beings than can possibly be nourished properly. The surplus of men is, consequently, eliminated by want, as Malthus [41] predicted. This enforced sub-

[39] Ludwig Feuerbach (1804-1872) was, perhaps, the most influential of the German materialistic philosophers. He began as a Protestant thinker guided by Hegel's mysticism, but ended in a positivistic negation of the value of religion. *Das Wesen des Christentums* is his chief work.

[40] Karl Marx (1818-1883), author of *Das Kapital,* was a German Jew who spent a great portion of his life as an editor and an organizer of the Socialist movement. The literature dealing with his work is too vast to be discussed here. One should note, however, the excellent monographs of V. Cathrein and F. Tönnies.

[41] Thomas Malthus (1766-1834), English political economist, was the author of the exceedingly pessimistic *Essay on Population* which suggested the possibility that mankind could increase faster than the means to nourish them could be provided.

jection of the proletariat is exploited by the profiteering capitalist, who doles out to his workingmen such a wage as will suffice to supply only minimum existence requirements (Ricardo's iron law of wages).

Against this situation the classes robbed of their rights must band together. Organization alone, however, will not safeguard them against misery. During periods of crisis in industry, the capitalist produces more than the consumer demands. This surplus of commodities has the effect of lowering prices with mechanical necessity. The capitalist no longer makes money. He must dismiss his workingmen in order to avoid catastrophe. From this economic cycle there is, as things are, no escape excepting permanent proletarian misery. One way out exists: let the wage-slaves, the proletarian society of the future socialized state, impersonalize the means of production—let them "dispossess the dispossessers." In the new order thus created, the natural goodness of man will be revealed and placed in power. The officials of society will labor as zealously for the socialized state as the capitalist once labored for his bank-account. Happiness will reign upon the earth.

Let us note that the system of materialism, viewed historically, has a real value in helping us to interpret facts relative to much of industrial cause and effect. Its cultural corollaries, however, are always paltry and strained. It flaunts a prophetic dream with great fervor, and hopes this will supplant religion among the masses. But sooner or later these masses see through the dream, and realize that man is as little an "official" by nature as he is the born shepherd of pastoral poetry. Marxism impressively describes the industrial conditions which prevailed during the Manchester era; but already today practical experience has exposed the fraudulent character of its proposed remedies. Even so, the moral task of raising the proletariat

out of its misery abides like truth. It is this task, genuinely Christian in every sense, which gives Socialism all its offensive power; and yet it is Christianity alone which recognizes that social equality can be achieved not through a blind mechanical process but solely through the exercise by men in general of a freedom which gladly accepts the burdens of responsibility.

Religious Nihilism

The philosophic nihilism of the ending nineteenth century was complemented by a certain radical religious nihilism. Based as they were upon trust in the individual conscience, the Protestant churches could not avoid a universal split into fractions. It is true that able conservative theologians erected a system of pious and patriotic orthodoxy which they fortified with various Hegelian concepts. But there were others, equally able and less conservative, who proceeded to reduce religion to "its proper sphere"—that is, to enlarge the area of the world and to narrow the area of the believing soul to such an extent that the second was stifled in its cramped quarters.

Schleiermacher

Schleiermacher,[42] the Platonically minded theologian, proposed in his system of dialectic the principle of an

[42] Friedrich Ernst Schleiermacher (1768-1834) was professor of theology at the University of Halle and later at the University of Berlin. A great deal of his energy was devoted, however, to preaching and moral teaching. Schleiermacher represented the liberal movement in modern German Protestantism, encouraging as he did the expression of religious dogma in terms of philosophy. His chief work remains *Der christliche Glaube nach den Grundsätzen der evangelischen Kirche,* but more readers have profited by his *Monologen* (translated as *Soliloques*) and by his restorations of Plato and Aristotle. See an excellent monograph by W. Dilthey.

"ideal" and a "real" factor of knowledge, which principle is useful enough methodically. He believed that science might be divided into ethics and its history, natural science and natural history. Knowledge of God through reason or Revelation he considered alike impossible. Believing sentiment "intends" God and is afforded peace by Him. But the only definition of Divinity at which we can arrive is this: God is "the all."

Religion thus withered into a form of neo-Spinozaism. D. F. Strauss [43] was more logical when he answered the question, "Are we still Christians?" with an emphatic "No." The amiable, comfortable epicureanism of knowledge and culture which he presents no longer merits the label of religion. Strauss merely held to a quiet, untroublesome reverence for the Universe. Necessarily his and other men's professions of "enlightenment" in matters of spiritual faith enkindled a reaction. Occult superstition dogged it like a shadow. Novalis,[44] loving death with a dreamy poetic affection, had sought to bespeak nature with a variety of magic, so that he might remain nearer to the shades of the departed. But to this lofty variety of superstition such stupidities as hypnotic nonsense and credulous commerce with ghosts were allied. And Novalis, in spite of his flighty fancies, faced the dilemma of destiny: Europe will be Christian, or it will not be.

[43] David Friedrich Strauss (1808-1875), whose *Leben Jesu* was designed to disprove the historical authenticity of the Gospels and to make of Jesus a myth, was also the author of *Der alte und der neue Glaube,* which offered a cheap materialistic substitute for the Christian religion.

[44] Friedrich von Hardenberg (Novalis), born in 1772, died in 1801, was not merely a charming romantic poet but also the author of several suggestive treatises which ought, perhaps, to be termed meditations. In *Die Christenheit oder Europa* he developed the thesis that "only religion can revive Europe and reconcile its peoples."

4. The Isolated Late Romantics

In the midst of materialistic neo-barbarism a few isolated late romantics meditated upon "outworn" philosophical problems while they themselves went unobserved by their fellows or offered a target to popular scorn. They were fated to write the swan-song of nineteenth century culture, and in doing so were perfectly genuine no matter how untenable their theories may have been. Arthur Schopenhauer's [45] system is a mosaic composed of fragments taken from German idealism. From Kant he borrowed the concept of the "intelligible character" which in its existence (as thing-in-itself) decides freely; from Fichte he took the concept of appearance as the object of knowledge; and from Schelling he derived the doctrine of the will as the first cause of nature, and the notion of intelligence as the light of the will. He shared Kant's teaching about space and time; but he posited causality as the only category.

Schopenhauer's "Will"

Schopenhauer's original and impressive achievement is his description of the fate of the modern personality. The kernel of this he holds to be the wild, insatiable desire of a volition unrestrained. He sees characters, unhappy in de-

[45] Arthur Schopenhauer (1780-1860) attached himself to no definite occupation. The last thirty years of his life were spent in Frankfurt, and his wide circle of readers brought him honors which—quite antagonistic though they were to the spirit of his philosophy—he appreciated deeply. Despite his satiric temperament, Schopenhauer was certainly neither a hero nor a hermit. His principal work is *Die Welt als Wille und Vorstellung,* which had been preceded by a work translated as *The Fourfold Root of the Principle of Sufficient Reason.* Most popular of his books is *Parerga und Paralipomena,* a collection of essays and aphorisms. See W. Caldwell's *Schopenhauer's System in its Philosophic Significance* and Kuno Fischer's *Schopenhauer's Leben, Werke und Lehre.* A good popular introduction is afforded—strange though it may seem—by E. Brennecke's *Art of Thomas Hardy.*

sire, as anarchical "will atoms" hostile to one another. The modern beast of prey has only one choice—that between devouring and being devoured. If it triumphs and destroys its rival, it celebrates a brief, satisfied victory. The human will is served, therefore, by taking reasoned cunning for its guide. It pictures unattainable goals and promises that when these are reached there will be a surcease of the terrible restlessness. But man is always deluded: out of every wish that is fulfilled, thirsty desire springs up more insatiable than ever. If for the moment there is nothing left to crave, grey tedium gnaws at man's vitals. In fact, his raucous and empty life drags on between hunger and tedium.

Relief comes only to exceptional men, in whom the light of reason gleams so brightly that the insanity of desire stands revealed. In pure, disinterested contemplation of beauty the eye that is otherwise weary is made lustrous by emancipation from idle visioning of goals. Only the saint, however, rids himself of the arch-curse in the blood of man, by denying the world and destroying his will. Schopenhauer honored the saints of Christendom, though he interpreted them biasedly in the spirit of his own ideal, which was Asiatic. He desired not that victory over the world which is gained by holy suffering, but rather the ending of suffering. That was, of course, Buddhism and the negation of European philosophy. In Schopenhauer weary minds returned to India, the cradle of thought. The ring was closed: a great historical epoch of philosophy had ended. At present philosophy faces the task of retrieving what was lastingly important in the work of this epoch.

Nietzsche

Meanwhile European culture, grown unnatural and weary, sensitive to pain to that extraordinary degree which finds expression in Schopenhauer, aroused the ire of Fried-

rich Nietzsche.[46] He did not negate the prevalent perversion, but made war upon it. Poetic, Protestant by birth and breeding, he conceived of the materialistic culture which nauseated him as the amorphous offspring of "enlightenment" and the modern dream of happiness. Nietzsche's greatness rests upon his contempt for scientifically created comfortableness. Gifted with a fine poetic power, master of a diction which preserves a rare glow and a prophetic beauty, he announced with the vehemence of a seer the road which he thought would supply mankind with an escape from the musty narrowness and flaccid meanness of the nineteenth century. Every means which seemed to promote this "victorious rescue" he adopted passionately, but soon tossed aside and satirized quite as passionately. Now it was Wagner's music that was to be the "blonde mother" of a heroism which, scoffing at pain, would heal Europe. Then it was the agreeably reasonable and malicious anti-Christianity of Voltaire which promised success. On this second doctrine, Nietzsche built up his glittering ideal of the Superman. Finally he staked everything upon the "will to power."

Wagner, Voltaire, Schopenhauer, Goethe, once reverently venerated, were in the end laughed to scorn. In solitary majesty—it was the last phase—the redeeming "psychologist" Nietzsche sat on the throne he had erected for himself, enveloped by the shadows of madness. It would, however, be altogether dishonest to feel one had disposed of his

[46] Friedrich Nietzsche (1844-1900) was the brilliant son of a Saxon Lutheran pastor. At the age of twenty-five he was appointed professor in the University of Basel. Very sensitive and rather frail of constitution, he succumbed to insanity after 1888. His works, most of which are available in translation, include *Die fröhliche Wissenschaft, Also sprach Zarathustra,* and *Jenseits von Gut und Böse.* The standard and most interesting biography was written by his sister, Frau E. Förster-Nietzsche. Among the critics P. E. More (*Shelburne Essays, Eighth Series*) and G. N. Dolson (*The Philosophy of F. Nietzsche*) may be enumerated.

teaching with a reference to that madness, which had its origin in physiological sources. The ideal of the Superman, the basic idea of his most effective book (*Also sprach Zarathustra*), permits of varying interpretations. But all of these enforce the conclusion that will and courage to face a tragic downfall imply despising pleasure and seeking to accomplish a great task. In order to strengthen the passionate, yes even Bacchic, will which he proposed as an ideal, Nietzsche praised the Dionysiac enthusiast of antiquity at the expense of the Apollonic thinker. At first the Superman was conceived of as a stage in the (Darwinian) evolutionary development of man; then he became a genius in the sense employed by Schopenhauer; next he was a man of cool, stern power after the image of Napoleon; and finally he turned into a lordly person,—something like an English squire,—noble, generous, strong, and not given to making enthusiastic plunges into melancholy from the bright surface of life.

This healthy, shrewd lord-man of sound instincts is (so Nietzsche will have it) the opposite of the vengefully cunning, timid, creeping, remorseful slave-man. The Christian, he declared, is this slave-man. Against "slave morality" he loosed an unbounded hatred and also, ultimately, his quite cumbersome wit. In estimating it one remembers that satire is not always the same thing as truth. Nietzsche's doctrine must face the question, Where is there more of spiritual power and greatness—where the poor, the weak and the sick are battered down, or where their burdens are borne by healthy men strong and generous enough to render service? Where is there greater governing might than is Christ's, who reigns victoriously in human hearts? We may confidently say that in attacking the Christian virtues Nietzsche was as wrong as Spinoza had been. He confused humility with timidity, sorrow with self-mutilation, love with

sentimental pleasure. But whenever he was not blinded by anti-Christian hate, he praised virtues which are also revered by traditional ethics—truthfulness, uprightness, heroism, chastity, obedience, patience, zeal in work, contempt of personal comfort. Certainly all these have been practiced most faithfully by the Christian saints and martyrs.

Music

As genuine romantic souls, Schopenhauer and Nietzsche were at one in their reverent admiration of music. According to them this art speaks of the will and of the nature of the world more directly, and in a more universally understandable manner, than all literary language. The romantic spirit wrote most clearly about its mystery when it wrote a song. And music, which combines spiritualized moods with the world of sound, was in all truth the refuge by which the romantics were saved from their self-imposed isolation of soul. Nothing else could so effectively redeem the romantic personality. Bach's [47] cadences, which rendered homage to the genuine Redemption, have had the loftiest influence; Beethoven voiced the most completely hidden feelings of a splendidly endowed soul and taught men how deep their emotions could really be.

Wagner

Then the gifted dramaturge Richard Wagner [48] undertook in all seriousness to write the music of redemption; and in so doing he, like Schopenhauer and Nietzsche, demanded far too much of his art. It was precisely for this reason that he did not attain to the mysticism of Bach and

[47] Johann Sebastian Bach (1685-1750), master of counterpoint and great composer of religious music.

[48] Richard Wagner (1813-1883), mighty dramaturge of operatic poetry, strove to give music a "metaphysical content." See P. Becker's *History of Music.*

Beethoven, although his work conveys the mood of later Romanticism as no other man's does. There is no sense in the attempt to apply the critical standards proper to poetry or symphonic melody to Wagner's "drama of language and music," or in the more or less popular habit of upbraiding the opera because it is prodigal of theatrical media and loves pose. Nietzsche's criticism, often thoughtlessly aped, is quite as exaggerated as is the hero-worship of the Wagnerians. The antagonism of the twentieth century to Bayreuth is attributable to a great extent to the Dalai Lama perpetually enthroned there and his attempt to make opera take the place of liturgy.

Richard Wagner's art is a finale and not an Easter bell. Its metaphysical content deepened during the course of its development. At first it presented romantic love as redemptive. Next the saving force was a blonde Superman and conqueror of gold, then it was Brünhilde's pity and Wotan's sacrifice of power, and finally it became Tristan's negation of will and Sachsen's renouncement. The philosophical road followed led from Feuerbach to Schopenhauer. *Tristan* is the opera upon which the stamp of Schopenhauer is most evident. It is a poem of the will, rich with unparalleled emotional effects. The technical disposition is masterly. But Schopenhauer speaks out of the calm greatness of the declaration, "I myself am the world." Wagner dips the Celtic motif deep into the mysticism of Asia. Let no one be deceived by the Good Friday scene in *Parsifal*. This opera also endoctrinates pity and amelioration of sorrow, not courage to endure suffering and so win out over the world. At bottom the meaning of the Wagnerian sacred festival is Nirvana. The composer's final plan was for an opera concerning Buddha. Thus Richard Wagner also, in a manner he probably did not realize, completed the romantic ring.

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Catholic Revival

It remains to close this chapter with a reference to another way in which the passing of the "century of idealism" was indicated. At a time when all philosophy—apart from specialized and really scientific enquiry—had been abandoned as futile, when the modern world had proved its inability to produce ideas having philosophic merit, the Catholic Church declared by the voice of its Sovereign Pontiff that the hour had come to affiliate thought with the tradition of love and wisdom, at the cost of finding a way back to the point where that tradition had been dropped.[49] It exhorted all institutions under its jurisdiction to return to St. Thomas and the Schools. And certainly we need to build anew upon the critical realism of Aquinas and his master —to give our own work stability and security by establishing it upon the foundation of a classical philosophy strong in experience of man and the world.

[49] *Aeterna Patris,* the encyclical letter of Pope Leo XIII advocating a return to Thomism as the right program for all Catholic institutions of learning, was dated August 4, 1879. "Neo-Scholasticism," or Scholastic doctrine amalgamated with the findings of modern science, become the program of the University of Louvain, under the tutelage of Cardinal Desiré Mercier.

CHAPTER VII

THE DECLINE AND RECOVERY OF PHILOSOPHY

1. Epigonistic Thinkers

Some eras are unfavorable to work in some one domain of knowledge. In a time governed by rank materialistic interpretations of science, individual students, no matter how gifted they may be, cannot render any great service to philosophy. Inevitably the finest talents devote themselves to other tasks. It was therefore natural that technical invention and improvement should become more and more completely the chief concern of the nineteenth century, the later decades of which produced no original philosophic doctrine excepting the extravagant speculations of Schopenhauer and Nietzsche. Noble and self-sacrificing thinkers opposed the tide of industrialism, it is true. The future will honor their memories. One cannot forget, however, that their work was neither the product of their own energy nor the outgrowth of a great tradition. They attached themselves to some one modern thinker, who himself had stood

Note: The reader of this chapter will note that the bulk of attention is paid to modern German thinkers, and that the notice taken of American philosophers is particularly slight. It should be borne in mind that the author of the book is a German, that the thinkers he enumerates may safely be considered typical, and that I could not very well crowd the book with material of my own. With some slight modifications, the original text has therefore been followed. A browsing reader may consult: R. Eucken, *Main Currents of Modern Thought;* R. B. Perry's *Philosophy of the Recent Past;* E. Boutroux's *Science and Religion in Contemporary Philosophy;* A. K. Rogers' *English and American Philosophy since* 1800.

apart from the rest of the world—though he may have been strong enough to do so. The greatest became camp-followers. For the most part their interest was confined to some particular problem, for example that of values.

Evolutionary Materialism

Ernst Haeckel [2] and Wilhelm Ostwald [3] were camp-followers of materialism. They maintained that reason was superior to the senses, and so avoided sinking into the epicurean barbarism of extremists like Büchner. Haeckel inlaid a theory of evolution into the philosophy of materialism, borrowing Charles Darwin's [4] hypothesis which, interpreted in many ways, has become a conventional assumption in the science of biology. One ought to observe that in this hypothesis a very few observations have been transmuted *a priori* into an extraordinarily comprehensive doctrine. Of late bitter strife has arisen regarding the celerity and the continuity of evolution, and there is no agreement about whether one or several trunks have figured in the process. Some matters of particular interest to philosophy may be noted here. Obviously evolution through selection, adaptation and the struggle for existence is conceivable only

[2] Ernst Haeckel (1834-1919) was a biologist and author of *The Riddle of the Universe.*

[3] Wilhelm Ostwald (born 1853), a Leipzig chemist and popularizer of science and philosophy.

[4] Charles Darwin (1809-1882), celebrated English naturalist, proposed the theory of development as an explanation of biological phenomena. The *Origin of Species* dealt with plant and animal life, the morphology of which was explained by Darwin as the result of a process of natural selection. Spurred on by ideas gained in reading Malthus, Darwin then applied his theory to the human race in *The Descent of Man.* He himself held that there had been inexplicable "gaps" in the evolutionary process, that the origin of life cannot be accounted for merely by evolution, and that the universe teems with mystery. His followers did not always bear these reservations in mind. See J. A. Zahm's *Evolution and Dogma* and A. R. Wallace's *Darwinism.*

in so far as living beings are concerned. Inorganic matter does not develop. It has no "self" which could preserve and enrich itself. Only creatures possessing "entelechy" choose, adapt themselves to, battle with environment. The declaration that selection, adaptation and struggle are mechanical processes like gravity, impact and pressure makes a competent physicist smile. Ernst Haeckel's physics was, to say the least, frightfully inaccurate. In the second place, there is no evidence to show that *man* develops himself by means of these "forces." He does not always choose the healthiest or the most beautiful woman for his wife; and in battle it is not the strongest and the bravest who survive, but the relatively weak and cowardly. Nor does the body of man adapt itself to nature: it adapts nature to itself, appropriating the wool of animals and the floss of vegetable cotton.

The Significance of the Evolution Theory

The future of the theory of evolution seems to lie in the direction indicated by Driesch [5] and Wasmann.[6] It will prove untenable unless it absorbs the Aristotelian concept of purposive adaptation. Those who deny the existence of "entelechy" and the development of intrinsic adaptability in order to establish a pseudo-physical notion of evolution, erect an unstable world-wide metaphysical structure upon the meagre basis of experience proposed by a biological working-theory. There is no room here to show how many of Haeckel's individual guesses, descriptive for example of "millions of years," are wholly without the support of experience. Good instances are his doctrines of "spontaneous generation" and of the "vast epochs" which have supposedly

[5] See page 470.

[6] Erich Wasmann, S. J. (born 1859) modified and spiritualized the evolutionary theory in such books as *Moderne Biologie und Entwicklungstheorie.*

led from the primal slime to the appearance of the organic cell. This primal slime—which was even labeled *Bathybius Haeckelii*—has been seen by nobody excepting its discoverer. Haeckel's theories of "atom souls" and "psychical evolution" are, like his ethics, quite as hollow as the more primitive doctrines of "fire atoms" and "neural disturbances." Quite in vain he strove to adduce Goethe as a witness for his atheistic materialism. His citations from the great poet were as venturesome as some of his drawings "from nature." Prior to Haeckel's time, Herbert Spencer [7] had thought out a system of evolution descriptive of the body and psychical life. If this testifies to a greater culture than Haeckel could claim, it is almost equally overladen with commandeered metaphysics. The skeptical reaction to this inevitably manifested itself even in biological circles. Today the agnosticism of Thomas Huxley [8] is in higher repute there than Spencerian Monism.

Equally sensational and false were the speculations of Wilhelm Ostwald [9] regarding the transformation of physical energy into psychical energy. His views will be given

[7] Herbert Spencer (1820-1903) published, at the age of thirty-seven (two years before the appearance of Darwin's *Origin of Species*), a work entitled *Progress: its Law and Cause* in which he posited evolution as a universal law and declared that all development is a transition from homogeneity to heterogeneity. He then planned to complete a *Synthetic Philosophy*. Parts of this appeared: *First Principles, Principles of Biology, Principles of Ethics*. A few of Spencer's contentions may be noted here. He preserved an attitude of relative agnosticism toward religious and scientific reality, holding that man's ideas are symbols and not certainties; he held that we can know only relations, and that therefore the business of unifying—or synthetizing—knowledge must apply one formula, which is "the continuous redistribution of matter and motion." This is effected by evolution which proceeds from the instable homogeneous to the heterogeneous in equilibrium. The rest of Spencer's philosophy is an attempt to apply this formula to various branches of science and morals.

[8] Thomas Huxley (1825-1895), English biologist and agnostic, was the author of *Lay Sermons, Addresses and Reviews*.

[9] See page 435.

more serious attention when somebody succeeds in reckoning in kilowatt hours the energy consumed by a fit of towering rage. Truly depressing are the ethical implications of Ostwald's theory of energy. His categorical imperative, "Waste no energy!" is no doubt useful to a street-car conductor in his daily occupation. Certainly, one must be careful to turn out the light upon leaving one's room. This lesson is inculcated by the monthly bill. Ostwald's imperative is calculated to encourage thrift. But, to speak seriously, it is apparent that he confuses the notion of causality in nature with the similar notion in applied mechanics. Nature is not a machine. The mill-stream does not waste energy, even though it drives no mill-stone. The miller *may* waste energy if he opens the dam too soon. On the whole the physicist's business is to select from all the various kinds of energy transmission in nature those few which are serviceable to man. This is necessary from his point of view, and may serve a practical purpose. Reality as it is has no room for expropriated metaphysics of the Ostwald brand. Nor does Haeckel's "law of substance," embracing the cosmos though it does, seem to hold good for rigid systems of limited celerity. The fact that this modern materialist sponsored a benevolent code of ethics—always a characteristic of Epicurean doctrines—does not diminish his aloofness from the world.

Science and Materialism

Nature students of the first rank invariably discovered the valuelessness of materialism as a theory of the world as soon as they had time to reflect upon the first principles of their own sciences. Helmholtz [10] took up the problem of

[10] Hermann von Helmholtz (1821-1894), professor in the University of Berlin, made revolutionary discoveries in optics and other departments of physics.

the criticism of knowledge and returned to the Kantian solution. In doing so he joined hands with F. A. Lange,[11] whom the materialists consider one of their own for no good reason and who, in his *History,* drew materialism into a limelight the test of which it endures poorly. He estimated without prejudice the bright side of the system of Democritos, which admittedly does provide a healthful antithesis to exaggerated spiritualism. He also adopted from the romantic philosophers the notion that religious beliefs are myths; and his theory of the "emotional uplift" caused by poetry remained pretty nearly on the Feuerbach level. But it was to Kant that Lange appealed for proofs that knowledge of what is suprasensible cannot be attained.

"Back to Kant"

The recipe, "Back to Kant," was accepted not only by reflective scientists and historians but also by prominent opponents of an arrogant, inhuman industrial barbarism, and by certain apostates from Hegelian thinking. Kant's great books were edited, annotated and paraphrased with the most scrupulous care. The achievement of the authors of Kantian studies (Erdmann, Liebmann, Riehl among them) [12] is, however, philological rather than philosophical in character and importance.

All neo-Kantians part company when they proceed to explain the doctrine of their master. A classic example is

[11] Friedrich Albert Lange (1828-1875), author of *A History of Materialism,* was the enemy both of materialism and spiritualism. During his last years he was interested primarily in theories of social reform.

[12] Benno Erdmann (1851-1921), author of Kantian studies, is also remembered for his *Wissenschaftlichen Hypothesen über Leib und Seele,* a study of the bearing of causality upon the relations between body and soul; Otto Liebmann (1840-1912), author of *Zur Analysis der Wirklichkeit,* came to have a considerable appreciation of Aristotelian metaphysics; Alois Riehl (born 1844), author of *Der Philosophische Kritizismus,* was definitely positivistic in tendency.

the controversy between Erdmann and Fischer [13] regarding the transcendental method. Kant deduced the fundamental notions of his system from the pure function of synthesis, and not without the influence of psychological classifications. He stated his fundamental problem when he asked: "What judgments must be assumed as universal and binding in order that the exact sciences can be developed accurately, can be begun rationally?" The second and more valuable portion of this question he stressed in the *Prolegomenon.* But the Erdmann-Fischer controversialists could see only one side of the matter.

In general the neo-Kantian practice has been to posit some ideas of the great Königsberg teacher—without any investigation of them—and to eliminate other ideas. Thus tables of categories very different in character have been drawn up, and a host of "critical" systems have appeared side by side. We can notice only a few of the more important of these. In all of them laborious and extensive detail-work shares in accepting sensory atomism and reliance upon the formative, object-constructing power of thought. The synthetic function is seen acting as a kind of cosmic cement, and combining psychologically discoverable elementary contents of consciousness—sensations and representations—into objects which can be experienced. Most of the older Kantians, like Liebmann and Riehl, held these opinions. Thereby they were brought close to what is termed "immanent" philosophy. The ego of apperception is interpreted as a human species-ego. If natural science is possible (runs the argument), the laws which govern facts must be none other than the laws which govern thought. Nature must allow that to happen which has

[13] Kuno Fischer (1824-1907), a brilliant interpreter of literature, was the author of *Geschichte der neueren Philosophie.*

been correctly thought in advance. The world must govern itself according to science.

One is tempted to call these relatively psychological versions of Kant professors' sleight-of-hand. The harmony existing between ideas which serve as models for the universe and facts is made plausible when these ideas are accepted as being God's. But if it be the human species-ego which thinks them, then verily a good deal is attributed to them by the way of world-formative power. Furthermore the philosophical timidity of the neo-Kantians, who held their breath in fear every time a natural scientist of the second class made an oracular pronouncement, ventured no farther than to suggest that no contradiction is involved in the assumption that a causal mechanism can run on in conformity with the purposes of a First Intelligence. Newton's words on this same topic were stronger and more profound. A. Riehl's exposition of the Kantian theory of apparition was even more arbitrary than Liebmann's. In itself (he said) the ego receives the chaos of its own sensations which formative thinking projects into the outer world, thus building up an environment of objects.

Wundt and Lipps

The earlier neo-Kantians were inclined to diagnose the formative functions, together with sensations, as a psychological condition. The "pure reason" of Kant became, in their view, human thinking forming human sensations. Fries [14] was one of the first to adopt this view; and through

[14] Jakob Fries (1775-1843), whilom professor in the University of Jena, saw his academic career interrupted by the dramatic events which followed the murder of Kotzebue. He was one of the first to attempt to translate Kant into terms of what has been called "Anthropologism" or "Psychologism." In his *Handbuch der psychischen Anthropologie,* he distinguished between three faculties of the soul—knowing, feeling and power to act—and discussed the problem of habit. See the monograph by R. Otto.

him the psychological criticism of knowledge which had developed in England gained ground in Germany. Both the great German psychologists, Wundt [15] and Lipps [16]—to whom psychology as a special science with methods of its own is deeply indebted—labored in the spirit of this conception. Wundt held that the synthetic function is a fusion of psychical elements, Lipps interpreted it to be a complex-formation. The alien character of a fact which is revealed in perception was described by Lipps as the "summons" of the object. The actuality of experience without experienced substance brought Wundt, self-certainty of the ego brought Lipps, respect for the order prevalent in the universe brought both, close to Fichte in their later days.

Vaihinger

The reigning timidity of a speculation was a boon to those thinkers who emphasized the skeptical aspects of the critique of reason. H. Vaihinger [17] considered thought the art of giving order to appearances, of adapting oneself to events, and of finding one's path aright in the world. Assumptions, hypotheses and theories serve (he declared) in making the simplest and most comprehensive description

[15] Wilhelm Wundt (1832-1920), professor in the University of Leipzig, was one of the first to conduct a laboratory for the study of experimental psychology. Besides the vast and extraordinarily learned *Völkerpsychologie* (10 vols.), he wrote a *Logik* and a *Systeme der Philosophie.* See monographs by R. Eisler and F. Klimke.

[16] Theodor Lipps (1851-1914), a Munich savant, author of *Leitfaden der Philosophie,* was also a prominent student of aesthetics.

[17] Hans Vaihinger (born 1852), author of the famous *Die Philosophie des Als Ob* recognizes in Kant his guide though not his master. The essence of Vaihinger's doctrine seems to be that all metaphysical speculation is contingent upon antinomies; that this speculation, like all other forms of thinking, is essentially a biological process and therefore designed to serve the instinct of self-preservation; and that the test of the value of an idea is its serviceableness.

of phenomena possible to man. If these prove useful in establishing order among facts, they have accomplished all that can be expected of them. The question whether they are true or not is idle. The basic assumptions which figure in a given explanation of the world may even harbor inner contradictions. Thus atoms may be thought of as not occupying space, although bodies composed of atoms do. One may well doubt that natural science will ever make room for this highly artificialized definition of the atom. A given space may be as small as you like, but it must still be space.

No doubt it is very appropriate that investigation in a new field should postpone the question as to what is the precise truth in the matter and begin by thinking through assumptions, pro and contra. As yet its conclusions remain to be established and rendered secure. At first hypotheses will be employed provisionally. With all this, however, only a very diffident philosophy can be content. Yet Vaihinger indicated his point of departure thus: "In case of doubt, it is better to act *as if*"—the famous *als ob* of so much contemporary German speculation—"the soul, for instance, were immortal." We may well believe that after having participated in so many skeptical ventures, humanity is badly in need of a more firmly established conclusion. Nothing could so clearly indicate the disreputable character of a civilization as its adherence to this principle: "Act *as if* you were in earnest."

Pragmatism

If thought be the art of finding one's way about in the world, or an adaptation of the psychological organism to events (as Vaihinger and also R. Avenarius have taught), then the achievements of this art are not true but useful. Whoever is adaptable will enrich his life. If we scrutinize

this notion, we find the conclusion obvious: That is truth which aids development; and therefore a thing can be true for one person and false for another. One man can find satisfaction in fatalism, another can take refuge in indeterminism. This conclusion was drawn by the Pragmatists, notably William James.[18] Summing up to a certain extent the thought of F. C. S. Schiller [19] (who went back to the point of view of Protagoras) and of Charles Peirce [20] (who proposed a logical critique of knowledge), James gave the term "Pragmatism" wide currency as early as 1898. At a somewhat later date, he attempted to establish the usefulness (and therefore relatively the truth) of religious experience. But on the whole it is likely enough that an examination of the "happiness" and "prosperity" of most agnostic pragmatists would reveal these as not quite—true. Through some such process Pragmatism might serve as a roundabout road to religious insight:—a roundabout road, because the start was made in the wrong direction. Viewed differently, such a thing as the "pragmatism" of healthy common sense undoubtedly exists. Far from the study and the nighttime lucubrations of academia, the deeds of heroes, doctors, inventors and masters of art are brought to triumphant conclusions. The man of action can, moreover,

[18] William James (1842-1910), professor in Harvard University, was the son of Henry James the theologian and the brother of Henry James the novelist. Notable as the master of a virile and attractive style, James' approach to philosophy was nevertheless made through the sciences. Among his representative books are the following: *The Will to Believe, and Other Essays; Pragmatism; The Meaning of Truth;* and *Principles of Psychology.* See E. Boutroux's *William James* and R. B. Perry's *Present Philosophical Tendencies.*

[19] F. C. S. Schiller (born 1864) is the author of *Studies in Humanism* which appeared during the same year (1907) which saw the publication of James' *Pragmatism.* See (for Schiller and other newer British thinkers) J. H. Muirhead's *Contemporary British Philosophers.*

[20] Charles Peirce (1839-1914) was the author of *Studies in Logic.*

attain to conclusions about the primal realities of God, the soul and the world which are irrefutable in practice.

Immanence

The distance from skeptical Kantianism and Pragmatism to Positivism and the philosophy of immanence was not great. It was covered by lessening a little the confidence in the formative power of thought. Some philosophers merely observe that many conditions are not "posited" in the Kantian sense, but are simply accepted. Thus W. Schuppe [21] took from English Empiricism the sophistic principle that knowledge of the inner world is wholly certain, knowledge of the outer world very uncertain. Since, therefore, transcendental reality is at least unproved and capable of being dispensed with, one must try to comprehend *without interpretation* that which is directly experienced in consciousness. The existence of the ego is immediately certain; things aloof from consciousness are incomprehensible. A sensation is not projected, but is there where one perceives it and is organized as one perceives it. Every perception is knotted to conditions which, when they recur, force us to expect the same perception. The critical realism of Oswald Külpe [22] has since provided the necessary critique of this point of view. The movement of the image we form of the sun is not the same thing as the movement of the sun. Other attempts to formulate a "physics of knowledge" have proved equally unsuccessful.

[21] Wilhelm Schuppe (1836-1913), author of *Erkenntnistheoretischen Logik* and *Grandzügen der Ethik,* denied the existence of objects as things capable of being known and affirmed only the immanent content of consciousness. He then applied this view to the field of ethics that the will to affirm self is the essence of justice, and that consciousness of self is the highest of values. This notion, professed by several philosophers, is termed the Philosophy of Immanence.

[22] See page 466.

Avenarius

With a comprehensive armory, R. Avenarius [23] attempted to purify experience of unnecessary ingredients of thought. Forms of reason—speculative principles, hypotheses—he declared, should not be affixed to experience. One has need only of the ego and its environment. This last includes stimuli, the declarations of other individuals, neural media, and the influences inherent in material changes. Avenarius' criticism of knowledge, biological in character, had the uncommon value of bringing to light the weaknesses of the empiric theory of appearance. An appearance-complex (the body) is appearance of the first order; the outer world is, however, appearance of the second order. The association of the two could never be defined minutely without the assumption of substrata of matter or energy. This "critique of pure experience" would, of course, render the presentation of even a very simple situation in any special science extraordinarily difficult and complicated. Nor could a contemporary scientist—a chemist, for instance,—concur with the brilliant attempt of Hans Cornelius [24] to explain "thing" as the "law governing its appearance." It is the fate of all such subtle theories of knowledge never to establish contact with any of the sciences. Accordingly scientific investigators have themselves essayed, of late, the critique of their sciences. That would mean the end of philosophy, if genuine philosophy were not more than criticism of knowledge.

[23] Richard Avenarius (1843-1896), during many years a professor of physiology, was one of the most prominent modern German positivists. His *Kritik der reinen Erfahrung* posits a science free of hypotheses.

[24] Hans Cornelius (born 1863), a prominent German chemist, is the author of *Transzendentale Systematik,* which attempted to establish a methodology of knowledge, on the argument that scientific hypotheses are all only imperfect attempts to define reality.

The Marburg School

This "more than" was discerned by the more significant neo-Kantians. They strove, therefore, either to base philosophy more directly upon the exact sciences (the Marburg School) or to divert it into a particular field quite its own (the Baden School). Hermann Cohen,[25] the very competent head of the Marburg School, saw that Kant's ethics was in need of as solid a foundation as his theoretic philosophy had found in mathematics. Accordingly he attempted to use law as a kind of mathematics upon which to base a science of the spirit. In so doing, he inevitably narrowed the application of his theory to the ideal sciences. Because he remained entirely aloof from psychological explanations, Cohen said much that is worthy of attention regarding the constitution of the object of investigation. He successfully discarded Kant's mistaken notion that the mathematical judgment is based on intuition. The mathematical object, he pointed out, takes its origin in the thinking subject. Nevertheless he differentiated too little between the varying phases of mathematical thinking. Logical thought and operative construction, postulate and susception of elements, ideal experience with the object analyzed—all these he leaves bunched together. As a result the mathematicians themselves opposed him.

[25] Hermann Cohen (1842-1918), the prototype of modern liberalistic Jewish thinkers, was an exceptionally brilliant professor at the University of Marburg. Although the "Marburg School" of philosophy was founded by F. A. Lange, it derived most of its prestige from the work of Cohen. Essentially his doctrine—expressed in *Kant's Theorie der Erfahrung, Kant's Begründung der Ethik,* and *System der Philosophie*—was a defense of pure reason as the source of knowledge and a repudiation of the *noumenon.* His ethics constitutes a variety of compromise between Kant and Marx. Cohen's exceedingly abstract style gave rise to the following comments: "Cohen is the only man in Germany who understands Kant; it is too bad that nobody understands Cohen." He is the subject of an excellent study by P. Natorp.

As a whole Cohen's system propounded once again the exaggerated Fichtean abstraction of the thing-in-itself and of the idea-less forms of observation. Like all Kantians he was a sensation atomist. Indeed he termed the element of sensation the real infinitesimal. But an urge towards objectivity brought him nearer to Hegel in this statement: "The thought of thought is the thought of science which brings forth itself." Hegelian also is his definition of ethics as the code of principles governing justice and the state. Moral action is the task of the rightly endowed person, whose unselfish will has for its object the legal enactment of its self-given law. Here one may discern a faint likeness with Marxian Socialism. Cohen also felt that a cautious philosophical bird's-eye view of the abiding law-givers in the history of human legislation would make possible a synthesis of the Mosaic religion with the newer Protestant deism.

From the point of view of theory, Natorp [26] developed the Fichtean characteristics of Cohen's philosophy to a point of greater clarity, definiteness and also narrowness. In ethics he sought to establish contact with practical pedagogy. Taking the Platonic virtues for his code, he hoped to lead men to the law of reason through labor and discipline of the will. Natorp was a co-worker with Cohen who, it must be conceded, was able to gather competent men round about himself. These dealt with history according to the favorite views of their master, with utter wilfulness and yet with scrupulous attention to facts. Their thinking was vitiated by the assumption that all things which are thought are also objects of thought; and their lofty idealism looked

[26] Paul Natorp (born 1854), one of whose achievements was a kind of clearer presentation of Cohen's views, is the author of a widely read *Sozialpädagogik*. He is a Kantian modified by the Platonic view of Goodness and justice.

with contempt at all realism, which they even characterized as brutal and stupid. Plato (read in their Kantian fashion) seemed to them vastly more important than Aristotle.

The Baden School

The Baden School believed that the theory of values was an important field for philosophical specialization. Wilhelm Windelband,[27] eminent as an historian and as the inventor of the history of problems, ventured to make a plea for the then very unpopular Hegel. Opposing the one-sided dominion of the natural sciences, he emphasized the equal significance and the especial methods of the cultural sciences. Natural science (he held) seeks to attribute all occurrences to the effect of as few as possible universally prevalent natural laws. It selects happenings in the contemplation of which those laws become very evident. Cultural science, however, selects *individual* objects and *individual* sequences of events, not for the purpose of making laws evident, but simply because these things are valuable in themselves. Logic selects trustworthy judgments by reason of their value as truth; ethics isolates good deeds for the sake of their moral value. Aesthetics and the philosophy of religion set forth adequately the values of beauty and of religion. It is therefore the task of philosophy to establish norms, not laws. And we may agree with all seriousness that it is one of the principal tasks of philosophy to make out a hierarchy of values and to discern the relative rank of each portion of that hierarchy. Since Nietzsche's time the establishment of values has absorbed the attention of a great

[27] Wilhelm Windelband (1848-1915) is known chiefly for his masterly *Geschichte der Philosophie,* in which the study of philosophy is conceived of as a study of problems. The "Baden School," of which he was the founder, stressed those aspects of Kantian theory that were concerned with values. His treatment of the relation between the natural and cultural sciences may be found in his *Geschichte und Naturwissenschaft.*

number of philosophical and psychological thinkers, but Windelband remains one of the most impressive among them. It is true that he relied too greatly upon his method. The first task of logic, for instance, is certainly to establish *trustworthiness*. To accept something as trustworthy is not immediately the same as to establish its *value*. Truth has value, but primarily it is not a value but a good.

Heinrich Rickert,[28] a disciple of Windelband, developed his master's system. His Kantianism resembles that of the earlier Fichte, the object of knowledge being conceived of as always propounded, never given. This view reposes upon the real truth that our judgments concerning reality as it is become *approximately* but never *wholly* correct as they travel the circuitous route of ideal theory. According to Kant the object is created by the judgment; according to Rickert it is created by evaluation. By making "trustworthy" and "valuable" equivalent, the second established the character of his philosophy. He also tempered the harsh opposition then existing between natural and cultural science by designing natural history and similarity of form in history as mediate branches of knowledge. From this he drew the conclusion that various methods can be applied to the same object.

The categorical and value tables set up by the Kantians differ so widely from one another that there is no room to present them here. This circumstance is sufficient evidence that the systematic deduction of the categories from the judgment lacks that necessity and universality of application which Kant and his followers professed to see. Indirectly it also involves a proof of the failure of Kant's

[28] Heinrich Rickert (born 1863) continued the work of Windelband and brought certain of its tenets to their logical conclusions. His *System der Philosophie* and other works contain much that is valuable, but are primarily noteworthy, perhaps, because of Rickert's attempt to interpret the categories of knowledge and being as principles of values.

"Copernican" revolution in philosophy. The categories are, as Aristotle declared, the highest classifications of real existence. However frequently the Kantians may have asserted that Aristotle's own categories are not systematically associated, the demonstration of such assertions must still be made. The exceedingly sharp and pertinent thinking of the followers of the Königsberg sage has been fruitful and stimulating within certain narrow confines. But in all truth they have done less to promote an appreciation of their master than some of his opponents—newer critical mathematicians, natural scientists and others—have done.

The Return to Hegel and Fichte

Finally it became evident that deep burrowing into the Kantian system would drive epigonistic thinkers out of it. They found themselves on the road which leads from Fichte to Hegel; and their systems began to reveal Fichtean and Hegelian traits. Metaphysical enquiry, stimulated by this change of direction, led in the end to a Hegelian renaissance. In some instances a similar movement ended in a new affiliation with Leibnitz. Seen from the relatively adequate point of view of the present decade, these two rather than Kant appear to be the pillars of modern speculation.

J. F. Herbart [29] shared Hegel's sensitiveness to dialectic opposites. But in dealing with them as contradictions in formal logic, he did not so much incorporate them into his thinking as snuff them out. It seemed to him a contradiction in terms to attribute a number of properties to a thing. For if (he said) something is red and perfumed, then the red is equal to not-perfumed. Such overemphasis upon the

[29] Johann Friedrich Herbart (1776-1841), noted primarily for his contributions to pedagogical science, was professor in the Universities of Göttingen and Heidelberg. His metaphysics show many affiliations with other philosophers, but he was almost the first to make psychology minister to education. His *Allgemeine Pädagogik* remains a classic.

idea of contradictory opposites is manifestly artificial and arbitrary. Herbart accepted as a premiss the Kantian concept of a world of appearances, but stood with Leibnitz in drawing conclusions from the imaginative representations to reality. "Appearance," he said pertinently, "is so much indication of being." He developed a Static and Mechanic of representations which (fantastically enough) negated the notion of exact psychology.

Gustav Fechner,[30] the founder of Psychophysics and Experimental Æsthetics, stood with Hegel and Goethe for the existence of qualitative properties in the outer world, which, excluded from the "nighttime view" of natural science solely for the sake of convenience in method, are not therefore without an objective basis. Naturally such a view is tenable only when the spiritual origin of the world is assumed; and Fechner speculated about the "life to come" in a manner that was gently lyrical rather than scientifically calm.

Hermann Lotze,[31] highly educated and profoundly schooled in the sciences, based his Leibnitzian view of the world upon broader bases of experience than had been taken into consideration by his master Fechner. We must, he affirmed, think things after the analogy of our souls; for the soul is the only thing we know intimately. Similarly, the ultimate cause of the world must be an absolute personality according to whose chosen purposes the cosmic mechanism runs. It is easily understandable why critical philos-

[30] See page 405.

[31] Hermann Lotze (1817-1881), professor in the University of Göttingen and one of the noblest of modern German thinkers, was not only an eminent biologist but also the enemy of materialism. Professing a teleological point of view, he exerted a wide influence by reason of his attractive style. His masterly autobiographical philosophy, entitled *Microkosmus* distinguishes between the world of forms and the world of values, affirming that the key to the first must be sought in the second. His other works include a *Logik* and a *Metaphysik*. See the monograph by K. Braig.

ophers of our own time should like to term themselves disciples of Lotze, who was probably the finest and most profound thinker of the period of philosophical decadence. His notion of the soul as a "microcosm" is a proof of that lofty culture which some decades ago quietly and courageously opposed the noise of materialistic barbarians.

Fichte's influence was also felt by the neo-Kantians, for his system is merely an exaggeration of Kant's. A certain community of sensitive thinkers has always been fascinated by his romantic mind. Schelling's influence, however, had its share in the continued appeal of the less brilliant but vastly more robust Hegel upon the modern mind. Non-Germanic countries, indeed, never wholly isolated themselves from the Hegelian tradition. Italy, France, Holland, and England were more interested in him than his native country was. There only a few faithful souls, preëminently Fischer [32] and Lasson, defended his doctrine against ignorant popular scorn. More recently, however, a Hegelian renaissance has been manifest even in less erudite circles. Windelband announced it in a special treatise. Students of law and history have returned to the study of Hegel's views. Thus Emil Hammacher,[33] a thinker who died young but left a great book dealing with the chief problems of contemporary culture, attained to a reasoned belief in a world spiritually directed in spite of the fact that most of his strength had been devoted to a pessimistic condemnation of mechanistic civilization and of the disappearance of healthy instinct from mankind. He combined deep understanding of social problems with the hope that the crumbling of Protestantism might be halted by a staunch profession of

[32] See page 440.

[33] Emil Hammacher, author of an important treatise on the roots of modern culture.

Hegelian convictions. In Italy Benedetto Croce [34] has combined a discerning critique of Hegel with a virile restatement of enduring Hegelian views. Undoubtedly a new and necessary synthesis of fruitful Hegelian metaphysics must begin where Croce leaves off.

Schopenhauer's Influence

The influence of Schopenhauer has, comparatively speaking, proved literary rather than philosophical. It is still valued too highly in Wagnerian circles. Schopenhauer has, it is true, stimulated such men as Deussen,[35] the Sanskrit scholar, to undertake enthusiastic but often chaotic interpretations of the sacred books of the East. In the fantastic Gnosticism of Eduard von Hartmann,[36] Hegelian and Schopenhauerean systems are woven together. His doctrine of categories contains valuable elucidations of the constraining demands made by conditions, which constantly

[34] Benedetto Croce (born 1866), perhaps the foremost of contemporary Italian thinkers, explains his relation to Hegel in *An Autobiography* and *What is living and what is dead in Hegel's Philosophy.* Known primarily as an excellent philosophic critic of literature, Croce is the author of two systematic works, *Philosophy as the Science of Spirit* and *The Philosophy of Practice.*

[35] Paul Deussen (1845-1919), a friend of Neitzsche, is the author of *Allegemeine Geschichte der Philosophie, mit besonderem Berücksichtigung der Religionen.*

[36] Eduard von Hartmann (1842-1906), one of the most curious of modern thinkers, was throughout life more or less of an invalid. His *Philosophie des Unbewussten* is his chief work, but he completed a series of other books including *Religionsphilosophie,* and *Aesthetik.* Fundamentally his system is a mixture of Buddhism and Calvinism modified by an atheistic notion of the Divine. This he varied further by affirming that the merging of all individual consciousness and desire in the "cosmic unconscious" would be accomplished through a process of evolution. There never was a more fiery hater of Christianity. He considered modern Protestantism utter hypocrisy, and averred that unless it rationalized its views in accordance with the Hartmann findings, the world would be captured by the "Ultramontanes." See the monograph by L. Ziegler.

modify the ideal structure of the categories. The basic universal fact, the root in which the kingdom of nature and the kingdom of the soul have their common origin, is (he declares) "the unconscious," which is not to be understood as "blind will" but as a union between the rational and the voluntaristic principles in a form of experience remote from all states of consciousness. In consciousness, the intellectual element—which is responsible for the formation of the categories—has separated itself too far from the illogical, voluntaristic element; but as this consciousness deepens, it gradually perceives the "tragic gulf" and sees the inevitable condition of pain which surrounds all individual existence. Therefore it becomes a desire to do away with this existence, and to sink back into the "all"—which Hartmann interprets in a sense more atheistic than pantheistic, as the prime substance which is spiritual but unconscious, "pneumatic" being.

Psychological Romanticism

Moreover, the final force of Romanticism is evident in the way in which intuitive psychologists like Wilhelm Dilthey [37] have mastered artistic presentation of thinker prototypes and the constantly recurrent images of world philosophy. Grown more temperate through the influence of Hegel, the psychologist Karl Jaspers [38] has recently issued an important psychology of the *Weltanschauung*, wherein

[37] Wilhelm Dilthey (1833-1911), professor at the University of Berlin, was primarily a cultural historian who greatly modified the conception of literary history. *Das Erlebnis und die Dichtung* is possibly his greatest work, although he was more specifically philosophical in *Einleitung in die Geisteswissenschaften.* Dilthey professed what is known as organic and intuitive psychology—that is a psychology which is concerned not with laboratory specialties but with the "whole man" and the "race." See the monograph by W. Heynen.

[38] Karl Jaspers is the author of *Psychologie der Weltanschauungen,* in which a certain concern with psychopathy is manifest.

types of subjective thinking are analyzed, with the conclusion that no objective truth is to be found in them. A somewhat tearful finale of the romantic protest against the mediocrity of modern life and its deleterious effect upon the soul may be seen in the writings of Rudolf Eucken.[39] He understands clearly enough that only the "living waters" of religion can purify and heal contemporary existence; but what he says regarding the content of truth in religion can hardly be called redemptive, is essentially a rather weak and timid creed modified by an artistic temperament.

The Neo-Romantics: Bergson

As a reaction against preponderant materialism, and as a kind of thirst created by vast desert areas of criticism of knowledge, a neo-romantic movement set in which hoped to attain to convictions regarding important problems without the aid of science. Once again, however, it was to become apparent that the intuitions of genius overestimate their power when they attempt to reveal more of personality and the inner life of the soul through artistic presentation than can be revealed by temperate psychology. Though intuition is indispensable, it never suffices to the attainment of complete knowledge. The most stimulating of romantic sages in our time is Henri Bergson.[40] He has written pro-

[39] Rudolf Eucken (born 1846), recipient of the Nobel Prize for literature, defended idealistic views against modern current materialism. Professor in the University of Jena, he was essentially a kind of mystic without any definite creed other than the belief that Christianity, freed from all institutional bonds, could supply the "spiritual community" so desperately needed. His books include: *Der Wahrheitsgehalt der Religion* and *Grundlinien einer neuen Lebensanschauung.* A very favorable but still critical view of the work of Eucken is supplied here and there in *Letters of Baron Friedrich von Hügel.*

[40] Henri Bergson (born 1859), most illustrious of contemporary French philosophers, is professor in the College de France and has lectured in the United States. He is the author of *Time and Free Will, l'Evolution*

found and even priceless pages regarding the problem of time, distinguishing between the passing of measurable outer occurrences and the "pure presences" before which experiences change.

These are Augustinian answers, long forgotten ones, and to them Bergson has lent a new pertinence. He is not to be considered a disciple of Schopenhauer, even though he has undoubtedly been influenced indirectly by German speculation. He elevates the life-urge—the *élan vital*—, unceasingly creative, conceivable in no spatial or quantitative category, to the position of sole reality in all that happens. In the schema of spatial representation-forms (he holds) we never seize upon the real *happening;* for the intellect, regarded as to its primary character and purposiveness, is nothing else than "an ability to produce artistic objects, especially useful implements, and to carry on this production to the point of infinity." To the comprehension of reality as a "*durée réele*"—as something happening apart—we can attain only in inner experience of the *élan vital* itself, through a direct intuition of a life "instinct" "grown conscious of itself" and endlessly differentiated as regards time and space. Intuitive speculation and idea-science, in Bergson's view, are really not connected by any common factor, but are "two opposite, though complementary, kinds of knowledge." And so, like Averroës of old, he has proposed the duality of truth. All knowledge of the outer world is, in essence, reduced to empty, merely practically useful "appearance." Being as such is comprehended by man only in his own free self, and in so far as this self in turn is analogous to God, "the life that does not cease." Despising all systematic thinking, Bergson's doctrine (though he offers

créatrice, and *Matière et mémoire.* Consult Stewart's *Critical Exposition of Bergson's Philosophy,* J. Maritain's *Le Bergsonisme,* and J. Chevalier's *Bergson.*

a systematization of metaphysics, calling at the same time for new "concepts") is at heart a spiritualistic pantheism, a religious mysticism of "spiritual activity."

Knowledge of men and of souls is cherished by the more or less therapeutic "School of Wisdom" founded by Count Keyserling.[41] Even though this School has been inspired in part by Indian experience, it scrupulously dissociates from itself the fantastic spawn of late Buddhistic superstitions. Not all movements of the same kind are so careful. Buddhistic secret teaching, neo-Platonic emanation theorems and spirit hierarchies, Gnostic illuminations and kingdoms of æons are mingled, shapeless and chaotic, in those systems of theosophy which coarse minds have thrown together crudely and adapted to low intelligences. These flourish and so prove, at least, the strength of religious desire. Bitter need is satisfied for the time being with clouds rather than clarity. Perhaps more light will ultimately be given them.

2. Transition

Certain demagogues affiliated with natural science had made breaches in the dam that kept back materialistic barbarism. With the opening of the twentieth century, genuine natural science itself began to take part in preparing mankind for a change in the general concept of world-reality. The neo-Kantians had identified criticism of knowledge with philosophy. It was not remarkable, therefore, that the scientists finally declared: "We can attend to that detail of a theory of knowledge ourselves." And they have been surprisingly successful. Mathematicians and physicists like Dedekind, Poincaré, Minkowski, Hilbert, Klein, Einstein, Voss, Leonard, Lorentz, Planck, Russell and Schlick com-

[41] Count Hermann Keyserling is the author of *Travel Diaries of a Philosopher.*

pleted investigations which must be ranked with the more important contributions to the criticism of knowledge. Schlick [42] has even published a very significant general doctrine of knowledge. Of course it is impossible to set forth all this achievement here. The following notations must suffice.

Mathematics

Gauss [43] though somewhat fearful of the materialistic clamor of his time, fortified his conviction that we are not able to prove geometry wholly *a priori*, and mathematicians generally have adopted his point of view. Hilbert then so modified geometry that the visual lay-out of its concepts has become a matter of secondary importance. The ideal objects of this science are, in many respects, totally independent of visibility, or the visual constructions serve only as model examples under concepts having wider meaning. This development in geometry goes far to prove the failure of Kant's "Copernican act." Mathematical deductions do not need a visual basis, nor are mathematical constructions capable of being carried through wholly *a priori*. But where elements derived from experience—be they ever so few in number—are accepted in mathematics, its apodictic rigor diminishes. Geometrical drawings without the addition of a formula permit of several explanations. As such, for example, they do not enable us to see if the first analytic principle can be applied to them. It is the extra-sensory formula which determines that—determines to which group of axioms the ideal object will correspond.

Moreover, Kant's derivation of arithmetical formulæ from acts representing time is also boldly repudiated by

[42] Moritz Schlick (born 1881), a Vienna professor, is the author of treatises on space and time as concepts in contemporary thought.

[43] See page 290.

modern mathematicians. Thus Dedekind [44] says that he "considers the concept of number wholly independent of visualizations of time and space." He is concerned primarily with logical operations; Hilbert [45] deals with specifically mathematical operations. The first serve the derivation of mathematical judgments, the second aid the extrasensory construction of ideal objects (which the mathematicians, curiously enough, term "existing things," even though they are wholly clear about the theoretic "location" of those objects). The elements of mathematics are assimilated at the very outset. Comparison and differentiation lead to numbers, the primary element of which,—the thought-thing "one,"—being without content, can enter into all combinations. Surprising ideal *experiences* may then often be garnered from objects secured operatively—experiences such as that a process of reversing the operations produces new objects and new kinds of magnitude.

Scientific Method

The assimilation of more elements, as is the case in geometry, is not confined to mathematical sciences. With the assimilation of time and movement, the transition to *kinematics* is made possible; with the assimilation of the ideal element of "center of gravity," the transition to classical *mechanics* has been made. Facts supplied by observation correspond with one section of this ideal science. These facts can, for their part, be incorporated into ideal sciences of lessened apodictic rigor,—as movement models, for example. Only experience can decide to what extent a fact supplied by observation corresponds with an ideate. The

[44] Richard Dedekind (1831-1916), professor at Zürich, was one of the foremost among recent mathematicians.

[45] David Hilbert (born 1862), professor in the University of Göttingen, is the author of various mathematical treatises.

strict sequence of science depends upon the unequivocal definition of elements, the demonstrableness of every operative step, and the making evident of every ideal experience through proof. Mathematics, like physics, goes far beyond the boundaries of sensory things. Because one always carefully defines them "as such," one also knows as many unobserved elements as one cares to. This fruitful interchange between ideal theory and experimental observation is sowing the scientific harvests of the future. The latest investigations of space, for instance, reveal manifold kinds of space instead of one Kantian space. The space conceived of by the physicist does not coincide with Euclidian space. Cosmic space (the stellar spaces) can be measured only by taking into account actual masses. The ultimate premisses without which science would be meaningless are not judgments and categories, but metaphysical realities that cannot be deduced from anything else.

It follows that no transcendental logic is qualified to write the law of nature. Through abstraction, ideal construction and the comparison of these with the facts supplied by observation, we may attain to approximately accurate formulæ of universal description, which may then be termed "laws of nature." If this be true, the Aristotelian and not the Kantian notion of logic is now established. Mathematicians are not, of course, prevented thereby from striving to arrive at a more precise definition of the ideas of infinity and number. But the fact abides that mathematics has no logic of its own. Experience teaches us that we can "arrange" reality according to logical principles. This teaching cannot be gained *a priori.*

Clear light has been thrown on these things by Moritz Schlick. "If," he observes pertinently, "it be unthinkable that one of the principles of logic should be proved false by reality, nevertheless that does not obligate reality to

anything: it need not bow to our way of thinking." But fortunately reality "is so created objectively that a small number of ideas suffices to indicate it unequivocably; and it is, therefore, not our consciousness which makes that reality knowable." Thus physics turns firmly from Kant to Hume. "The trustworthiness of empirical knowledge is merely probable," Schlick says again. "The presence of one part of the circumstances which constitute the conditions of a designated effect is guaranteed; about the other part of these circumstances nothing is known." That is a point of view attributable to Hume. And we may quote further: "Kant believed that it was possible, in mathematics and pure science, to arrive at apodictically certain judgments regarding observable and real objects. His purpose was merely to explain this fact, not to prove its existence. But we, whose faith in that fact has been shaken, find ourselves in a totally different situation. The Kantian explanation would be very well adapted to make understandable an apodictic knowledge of reality, if such a thing existed." But "apodictic truths about reality exceed the limit of man's capacity for knowledge, and he cannot attain to them." We may add that no really positive and pertinent critique of Kant's "Copernican thesis" has been made prior to the twentieth century. Therefore the great service rendered by Kant on behalf of the theory of ideal sciences as an unavoidable intermediate means for attaining to insight into reality has also only now been fully revealed.

The nominalistic criticism of knowledge formulated by contemporary natural science is naturally still limited—one-sidedly enough—to the needs of that one science which, by means of measurements, enlarges our experience of masses and special magnitudes. It is not adequate to other sciences, psychology and history for instance. Far too completely it restricts knowledge to classification, for the pur-

poses of recognition. But it is a good beginning—the unequivocal attributing of an exhaustively described sign to an object which has been adequately differentiated with characteristics necessary to it. Here is the symbol, and there is the object to which it is attributed. In favorable cases this symbol is a mathematical formula. The question "Who attributes, defines, differentiates, recognizes again?" remains unanswered. Only to this "who" can the idea and the meaning of the symbol belong. Moreover, objects that cannot be measured, if qualitatively definite, are knowable even though no formula may be at hand. There are even qualitative ideates. The lacunæ in the theory of knowledge we have outlined are supplied by critical realism (Oswald Külpe) and by the doctrine of meaning (Edmund Husserl).[46] These free themselves from "sensory atomism" and from the skeptical postulate which places confidence only in interior experience.

Positivism

That Positivistic thinking which bears a resemblance to the philosophy of Immanence (as developed by Wilhelm Schuppe on the basis of some ideas of Berkeley) and the doctrine of Empirio-Criticism (Avenarius), also tends towards a qualitative sensory atomism. Modern Positivists have, of course, done much to refine the system of their founder, Auguste Comte.[47] He, faithful to the spirit of the Age of Enlightenment, accepted the scaffolding of the special sciences as reality. It is precisely the impeccable

[46] For Külpe and Husserl see page 466 and page 470 respectively.

[47] Auguste Comte (1798-1857) was essentially an eclectic thinker who ransacked all departments of human experience and speculation for the materials of his doctrine. He ranged all the way from Diderot to Thomas A'Kempis; from Positivism as a theory of the sciences to Positivism as a religion. His principal work, *Cours de philosophie positive,* has been translated into English. See J. S. Mill, *Comte and Positivism.*

logic of Comte which proves the artificiality and one-sidedness of his system. Stirred by the inability of mankind to achieve something like the cultural unity of the Middle Ages, he first formulated a theory of progress. Three stages of human development were postulated—the theological or fictive stage, in which thought had recourse to the supernatural; the metaphysical or abstract stage, which sought to discern first causes and final purposes in metaphysical essences; the present scientific or "positive" stage, interested in facts—in "How" (*Comment*) rather than "Why" (*Pourquoi*). The relative is therefore everywhere substituted for the absolute. In order to prepare adequately for the new order, Comte proposed a hierarchy of seven fundamental sciences, including mathematics and sociology. Finally he appointed himself "High Priest of Humanity."

Phantasmagorical though all this was, Positivism rendered a valuable service by calling attention to the great phrase of Democritos, *salvare apparentia.* In all other respects, it is a system drawn up from the point of view of a static, inactive observer. A real occurrence cannot, for instance, be described by means of sensory physics. Can we conceive of the "sensation" of a falling axe as destroying both the "sensory nucleus" called the cerebrum and the *sensation* of the axe dependent upon that cerebrum? The axe would abide, but the cerebrum and the "axe image" would suffer sorely. Thoughts cannot be conceived of as arising out of sensations—that which *signifies* out of that which *is signified.* Finally this system is also by no means free of hypotheses: for simple sensation is a not-perceptible ideal object, not a fact. On the other hand, the perception picture, ideally separable, is coördinated with the shape of real substances in a strict mathematical manner. Gerhards proved that the relation of image prevails between phenogram and ontogram. A doctrine scorn-

fully discarded by all Kantians as naive realism, reveals itself here (as a result of precise analysis) as true. Instead of laughing over "flitting little pictures," the Kantians would have done well to think the idea of "representation" through to the end, consistently and exactly. They could not then have avoided seeing that all categorical systems like their own are inadequate *vis à vis* the advancing sciences and the fulness of all reality. It is this insight which now prepares the way for a new philosophy of being.

Comte tactlessly threw a great deal of incense round this system, which was merely an "advanced" hypothesis dignified into a philosophy. The highly cultivated English philosopher, John Stuart Mill,[48] avoided all such ceremonies, although what he called religion was really little more than a temperate and refined humanism. Profiting by his wide knowledge of the modern sciences, he sought to establish the empiricism of Locke and Hume upon a more solid foundation. His theory of inductive reasoning deals comprehensively with experimental methods and is, therefore, still very influential. With rare insight he noted that in spite of the fact that mathematics absorbs experience elements, it does not cease to be an exact science. In the final analysis, however, Mill's Positivism also has a negative effect. He narrows the field of knowledge in an extreme manner. It did not escape his careful attention that the sum-total of what is presented to the senses is much too incoherent to furnish one with a duplicate of the world. But because he did not take the needed step towards recognition of reality, he could offer no conclusion beyond a

[48] John Stuart Mill (1806-1873) tells us in his *Autobiography* how his mind and habits were formed. Interested as he was in viewing the facts of modern industrial civilization altruistically, his thinking became practical rather than speculative in character. In addition to his discussion of inductive method, Mill wrote well of logic, political economy and utilitarianism. His chief works are *System of Logic* and *Utilitarianism.*

"sensory possibility" difficult to grasp. Because he did not admit an objective basis, he was obliged to posit it (transcendentally). The question whether induction is valid in the same degree in all fields—whether, for example, one can predict resolves—remains unanswered, for the reason that we do not understand the harmony of the forms of dependency. It is precisely this question which calls urgently for an answer.

3. The New Critical Realism

Oswald Külpe,[49] the modest, steadily maturing, short-lived "philosopher of realism," refuted most convincingly the Sophistic presupposition that only inner experience is trustworthy, that knowledge of the outer world is dubious. There are (he demonstrated) many hazy, shadowy experiences which cling feebly to the memory and concerning which dependable judgments cannot be formed; indeed there are contents of consciousness the existence of which remains doubtful. The philosophy of Immanence, based as it is upon these things, is inadequate for the simple reason that it cannot be combined with the judgments of the separate sciences. It is not enough to say that the movement of the sun is a change in perception, because having said this one must proceed to apply in detail the laws of sensation to this movement. Manifestly the sun does not display a psychological behavior. One must likewise demonstrate

[49] Oswald Külpe (1862-1915) was a disciple of Wundt and a student of experimental psychology. His great work, *Die Realisierung,* was really the great impetus to what is now known as "critical realism." Beginning with a critique of idealism and positivism, Külpe arrived at the conviction that the "problem of reality" must be the chief concern of contemporary psychology. He then busied himself with a scientific analysis of the realities, contending they are neither experience-contents nor forms of thinking. One of the best commentaries on Külpe is M. Grabmann's *Der kritische Realismus Külpe's.*

that the scientist who speaks of electrons in advancing a hypothesis to account for certain manifestations of energy, is interested not in determining reality but in describing sequences of sensations in a roundabout manner. The philosophy of Immanence fails, therefore, as a theory of natural science, but on the other hand offers important data for an epistemological criticism of psychology.

Objective idealism overestimates the function of thought, as man exercises it. Thinking cannot produce real objects, but under certain circumstances it can produce ideal objects. Not all things which are thought are thought-things. That is true, for example, of the actual personalities of history, whom idealism is prone to honor so adequately. Külpe's conclusions about thought are of particular interest. Thought, as distinguished from representation, he views as the transcendentalizing function, which is directed toward reality in a manner entirely its own, not producing anything but honestly *meaning* things and (though only approximately) *defining* them. Thought does not alter the object through its intention. Nevertheless idealism, as the theory of all ideal sciences, Külpe holds to be invaluable.

Kant's transcendental examination of the unavoidable premisses of all the separate sciences gains a new significance in Külpe's generous version of it. He adopts energetically the point of view set forth in Kant's *Prolegomena*, and merely enlarges the number of sciences which are to be considered seriously; but he set forth in clear, untrammeled criticism the failure of the "Copernican attempt." The task proposed by Külpe, a transcendental criticism of the sciences of reality, remains to be performed by the future. But towards the accomplishment of this task his discovery that all hypotheses which prove successful and rich in significance have a foundation that must be regarded as transcendentally unconditioned and transsubjectively real is an

important contribution. In carrying on such work, philosophy will surely find health.

Towards the "Object"

Külpe also sought to develop and clarify logic by means of a theory of objects. In this endeavor he was, it must be noted, busy with something that had interested other philosophers and schools of philosophy. This transfer of emphasis from primal judgments to primal objects makes apparent, in itself, the extent of the revolution which has taken place in recent thinking. It displays a form of reflection Aristotelian rather than Kantian in character; and it seemed destined to rid philosophy of the unfruitful habit of constructing tables of categories. Külpe divided all things which can be judged into ideas, symbols and objects. Within these groups wholly different kinds of dependency prevail, and conclusions regarding each vary essentially in range and certainty. Objects are divided by Külpe into ideal and real objects, thus bringing the methods of the ideal sciences and those of the real sciences into closer union. It is now only a step to the view which holds that ideal science occupies an intermediate position, over which the approach to the real sciences must lead. In this manner Külpe revealed his insight into how to combine the advantages of the inventive nominalistic procedure with the necessities of a moderate idea-realism. Stuffs and energies are, we see with him, real objects of knowledge, even though we can define and calculate them only little by little, approximately, and then (finally) hypothetically with probable correctness. Over and beyond these things there appears, moreover, the domain of real souls, which bear a relation of reciprocal effect towards bodies. And from out of a reality so filled with many things, a thousand signs arise to indicate the existence of God.

The real world (Külpe holds) is arranged, according to genus and species, to conform with knowledge. This would be incomprehensible were the world governed by accident. As soon as the eye discerns once again the manifold dependencies which, in addition to mechanical causality, prevail everywhere in the cosmic process, their constant interweaving, intertwining with one another baffles comprehension unless one assumes that the "all" has its origin in Divine wisdom. Thus the light of a new philosophy, thirsty for reality and therefore sure to become Christian in the end, falls upon the classical proofs for the existence of God.

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Critical Realism: Driesch

Stimulated by Külpe, a school of critical realism has developed and rendered fruitful service. In particular it has been concerned with something that all branches of investigation throughout the centuries have emphasized more and more strongly—the concept of shape. Since men have learned how to divide the atom, they seem to see that the individuality of elements depends upon the structure of the electron paths. The chemist also is no longer primarily concerned with weights and calories, but with the stratification of atoms. The crystallograph makes visible that which in minute parts stamps itself with the same form. Physiology now teaches that one must take into account the shape of organs as well as biological processes. In psychology the concept of shape-perception is considered indispensable. The Aristotelian idea of form, so long despised, is—to sum up the matter—returning into favor everywhere.

We are seeing again, therefore, that "realized form, which living develops itself"—to use Goethe's phrase—is an effective cause, is the one thing in the growing, stuff-changing,

recuperating body that endures. Hans Driesch [50] has proved by rigidly conducted experiments that many organisms reconstruct themselves out of completely dissembled parts into their individual forms—a fact which cannot be accounted for without the idea of "entelechy." This "entelechy" is not a nebulous "vital force"; it can be thought of as *active* only in the spiritual sense. If one descends into its unconscious depths even, the voiceless will for self-development will be found there. Effective "entelechy" is, however, not to be described exhaustively without reference to a Former of forms. The philosophy of Hans Driesch has also, therefore, an Aristotelian and Christian flavor. Indeed, even the Einstein theory of stellar spaces, positing as it does a boundless finite world, transcends the Faustian "rhapsody over the infinite" and associates itself, though its calculations are much more precise, with the classical manner of thinking.

Husserl

Again, just as Külpe began to demonstrate scientifically the individuality and unique achievement of thought as opposed to sensation and representation, so Edmund Husserl [51] restored to a despairing and chaotic culture that strength and delicacy of thinking which had been blunted

[50] Hans Driesch (born 1867) is a biologist whose service to philosophy has taken two significant directions: the first towards vitalism in the study of life, with the Aristotelian conception of "entelechy" occupying the central position; the second towards a negation of psycho-physical parallelism as a theory unable to explain the facts of psychology. The following Driesch books are available in translation: *Mind and Body; The Problem of Individuality; the Science and Philosophy of the Organism; the History and Theory of Vitalism.*

[51] Edmund Husserl (born 1859) is primarily a logician who has come from the acceptance of certain Aristotelian notions to the advocacy of what is called "Phenomenology," one of the most widely discussed teachings of recent philosophy.

and corroded by generations of doubting philosophers. His teacher Brentano [52] had asserted with emphasis that among the things present in consciousness there are acts and ways of acting as well as "contents." Husserl himself firmly resumed the mediæval task of getting rid of the equivocations latent in many current symbols. By means of instructive examples he revealed how much wholly unnecessary strife about the meaning of words still rings out in academic corridors. By the words, "I am conscious of myself," one may mean: "I have, or observe, or reflect upon a 'content,' I know about it, I think it, I recognize it again." In all these cases (Husserl held) it is necessary to "distinguish," no matter how unpopular that term may be.

Attentive consideration of the various meanings implied must not, however, plume itself upon experiences acquired privately, as was the custom of the "beautiful soul" of the era of Romanticism. It is the philosopher's duty rather to draw attention tactfully to the essences of things—that which, out of the reach of accident, preserves its identity through all variations, just as, for example, the red of a rose, of a cloud, of a dream, stands in an essential relation to other colors, no matter where they may present themselves. Energetic thinking is not glued to the perception of the senses, but is concerned also with extra-sensory and supra-sensory aspects of the essences of things. Thought does not lay down laws, but views them receptively and without changing the object given. It itself is always based

[52] Franz Brentano (1838-1917) served for a time as Catholic theologian and professor. Later on he left the Church; but the tenor of his doctrines remained theistic, Aristotelian and even Thomistic. He was one of the most brilliant of modern German teachers and a gifted writer. His greatest treatise, a work on "theistic metaphysics," is only now being published piecemeal. An earlier book, *Aristoteles und seiner Weltanschauung,* is one of the best of modern commentaries on the great Greek. Brentano's influence has been and will be unusually marked. There is a monograph by O. Kraus.

upon this object, which is often simple and unified, though contemplation may dissect and reconstruct it. An abstraction does not apply to an object in such a way that a spiritual bond (a synthetic function *a priori*) abides after the dissection and reconstruction.

The function of thought can divide a thing into parts but cannot *partition* it; it can isolate a part but cannot tear it out of the whole. It directs *meaning* towards its object, and finds in this the fulfillment of its intention, regardless of whether the realized occurrence is perceptible to the senses or not. The investigator looks back upon the conquests of investigation, when he knows them fully, with a final realized categorical contemplation. Relations between essences become evident to him. Thus, for example, it is evident that I never, through an act of projection, *exile* a sense-impression of color *out of* my inner world into the outer world, but that I sense this impression as *outside myself*. Appearances are thus preserved by Husserl over and beyond hasty sophistic prepossessions. He parts company with all sensory atomism. Perception is seen as containing, above all, the properties of a thing-ness. Isolated inner world sensations, as given elements, are not facts. That which is really and indubitably *given* in perception is not to be known as mere inner experience. Cautious efforts to make out exactly what it is are, therefore, valuable.

Husserl's whole work grew out of the magnificent opportunity to tie into the Scholastic tradition threads which had long since been torn loose and spun out by themselves. He seized the opportunity skilfully, even though the limits of the method he instituted—*Wesenschau:* contemplation of essence—have not yet been determined. We cannot, in this necessarily brief outline of all philosophy, envisage the battles of the present hour and must refrain from trying to criticize Husserl's school. Only this need be said: con-

templation of essence is not in place where observation, experiment, introspection, logical deduction and meditation of or upon facts promises success. But undoubtedly there are occasions when only a frank and unbiased "contemplation" is helpful. In so far as ideal objects are concerned, it may be attempted with scientific certainty. But when it is applied directly to reality, intuition becomes something like an occult practice. Engaged in by the gifted poet or psychologist, the contemplative gaze can reveal buried treasure. Particular profit may be derived from exploration of the realms of æsthetics and ideals in this manner—an exploration which can, of course, be undertaken only by genius. Here an example has been set by Moritz Geiger,[53] who abandons unprofitable "analysis" in the field of æsthetics and succeeds in making evident precisely what it is that fascinates the lover of the beautiful.

Scheler

Max Scheler,[54] an unusually gifted student of the human soul, has drawn attention to experiences, rare and ripe with the influence of personality, which are not dealt with by the science of psychology. His analyses of the "intentional feelings"—resentment, for example—uncover obscure spiritual processes and relations. But there is an unfortunate element of the visionary, the mysterious, in his method. The future alone can decide where and how often his school loses itself in phantasmagory. Indeed, the whole teaching of Husserl and his followers needs critical examination, in

[53] Moritz Geiger (born 1880), Munich professor, is the author of *Psychologie des Gefühls.*

[54] Max Scheler (1874-1928), a professor of sociology resident in Cologne, has been concerned as a philosopher with values. His *Vom Ewigen in Menschen* and other books have attracted wide attention by reason of the sympathetic manner in which they derive ethical realities from the voluntaristic intuition sponsored by what is known as "Phenomenology."

order that what is really useful in their methods can be made clear. Otherwise this doctrine—which has received the name "Phenomenology"—is headed for a catastrophe as devastating as that which overtook the romantic movement. The present obviously needs temperate earnestness and clear conviction rather than overheated ecstasy in the presence of truth.

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It is the fate of victorious truth to become property deeded to no particular names. We honor the man who has discovered it, but not the thousands of other men who have passed it on and among whom there have been some of the highest order. Every century restates age-old wisdom in new language, and of course every century adds something of its own to the vast inherited treasure. The truly grave error of the modern epoch in philosophy is that it has despised truth which no longer bore a name, and attacked it for the sake of winning applause for its random sharpness of tongue. It is easy to build a glittering little bungalow on the marble and granite foundations of antiquity.

Philosophia Perennis

Today, however, we face a serious question: Shall we have truth and discretion, or originality and glory? Experience makes clear the necessity for the first two. The collapse, the hopelessness, of all strictly original philosophy is as evident as daylight. It is an inevitable requisite that every investigator, actuated by a spirit of scientific humility, incorporate his work into the structure of tradition. This tradition, however, is certainly that which has been preserved throughout the centuries by the Christian Church. There is a *philosophia perennis*, despite the facile contemptuousness of shifting little systematizers. Its representative thinkers have sacrificed fame in the service of religious wis-

dom. The names of these unselfish men are arrayed in honorable groups, like the names in the Biblical genealogies. They are witnesses for the truth of Christendom and of the philosophy it so carefully guarded—a philosophy the classical expression of which is found in the doctrine of Aquinas. Now once again, because of the victories gained by critical realism, that truth and that philosophy are more clearly evident.

Is it possible, necessary even, to inlay the valuable discoveries of modern investigation into the classic Christian system? Yes, indeed. This system has adequate room and altitude. Hegel's magnificent, though not wholly successful, attempt to dissipate the one-sidedness of historical philosophies and to weld together, without syncretism, their noble riches, proves that something better is possible in the future. Hegel failed because he was an individual worker aloof from tradition—which proves the necessity for accepting vigorously the classical tradition. The present time has decided for Aristotle and against Kant, so that the road is clear.

From the point of view of Catholic philosophers, the question is often asked: "Would it not be wise to build religious truth into the most important of the modern systems?" Would not such a procedure clarify, purify and deepen the Hegelian enterprise? The answer must be, "No." All modern systems are more artificial, are narrower, are more estranged from the world, than is the classical system. Moreover, the well-meant attempts made by various noble and profound thinkers have all been wrecked on the cliffs of idealism. The failure of Franz von Baader,[55] one of the

[55] Franz von Baader (1765-1841) was a physician, an observant critic of politics and sociology, a professor of philosophy and a somewhat rebellious Catholic theologian. In such books as *Fermenta cognitionis* he dealt in a rather aphoristic fashion with a multitude of philosophical questions. His point of view was that of a theistic romantic; his best ideas have much

most significant of German Catholic thinkers, is a pertinent example. Only seldom—in England—has there been any attempt to found a Christian philosophy upon materialistic method, and the result has been (could indeed only be) a weak form of deism. So also no variety of idealism can absorb the entirety of tradition. For instance, the revivers of the ontological views held by Malebranche—though Rosmini and Gioberti were illustrious thinkers—have not succeeded in wafting a "new Jerusalem" upon this earth, however valuable many details in their philosophies are. All these varied attempts have ended in compromise, which itself is, in the strict sense, a contradiction. On the other hand, every truth arrived at during the modern cycle can find a place inside the traditional pale. The revolution that has occurred in modern nature study, the rescue of form, shape and structure—these things and others prove the point.

in common with the more speculative mystics. Baader's most noteworthy writing is probably that which deals with problems of sociology and politics.

CHAPTER VIII

CONCLUSION—THE CONTEMPORARY CRISIS

The twentieth century had no sooner dawned than the white races began to sense the coming of stormy days. Control of terrestrial energies was no longer simply an affair of commonplace "progress." These energies had revealed themselves as weapons of war. Cool and unruffled masters of men had concentrated in the workshops of industry, under their direct control, enormous wealth, powerful means for influencing opinion, and a more than princely rule. Similarly the higher ranks of society abandoned the practice of decorating the interiors of dainty souls interested in enjoying themselves; and by means of intense and systematic self-control many rid themselves of the melancholy charm of neurasthenia. A shrewd use of a sense of superiority corralled undreamed of riches inside countries in which quiet, meditative forms of living were considered disgraceful. When the heart did come to the fore, it expressed itself in a turgid lyricism which pronounced itself elegant of style, but which was nevertheless derided frankly and heartily wherever social hypocrisy did not keep up a pose of admiration—an applause frosty enough and yet all this anemic art deserved.

From what roots could art have derived nourishment? Mystical and philosophical wisdom had been brushed away "like cobwebs"; and only what day-laborers in some laboratory of special science declared they saw was considered acceptable, demonstrated reality. The omnipresent retorts

and crucibles shut off from view that world in which the soul journeys, so that ultimately one could scarcely discern even the light that lingers in those beautiful gardens. As a result a kind of naïve bigotry had become the vogue. People swore blindly, enthusiastically, by every casual remark that fell from the lips of prominent scientists. But indeed enough of wild power and breathless passion stirred in men formed by a merciless materialism; and only a few timid souls, in need of blinkers by reason of their overwrought nerves, invented for their pleasure a fairy tale of the decadence of the modern world-conquering, predatory peoples.

The Political and Industrial Crises

The political crisis of the materialistic world, our industrial world, came to a head soon enough. All attempts to establish peace merely heightened the prevailing tension. With the World War, everything that a generation had exalted ebbed away. Heroism unparalleled bled to death on what were, after all, the altars of mammon. Uncannily intelligent Machiavellian diplomacy poisoned the public mind everywhere; and for sheer humanitarian reasons science helped to stifle thousands with selected chemical horrors. It is instructive to note that opinion, in arms at the mere thought of the comparatively innocuous dum-dum bullet, calmly permitted the sooty fires of flame-throwers to burn thousands of men alive. Nietzsche's dream achieved its glorious fulfillment. The "will to rule" was victorious, and that struggle which had been so warmly praised was come. Zarathustra's words—"Ye shall get it ever worse and harder; ye do not yet suffer as ye should" —these we read (we of all the battling peoples) and found good. Scarce had we dreamed them than they had already come true. We wanted them to come true. The great political crisis was our desire and our destiny.

Now that dust and the odor of decay have stopped rising from the bitterly contested fields, we see what images of history have been recast. A few world-international coalitions have been effected, but there is no danger that all peoples are about to dissolve into "pure humanity." The "great power," however, is no longer regarded as the highest form of society men have realized in history. Just as the clans and tribes were superseded by states, so now great powers and "well-protected" small nations have decided to enter into a tremendous plan for world government. This is, of course, not quite the same thing as the League of Nations. It is rather the empire—the "state trust"—which gradually subjects to its influence not merely crown colonies, dominions, protectorates and mandates (as is the manner of Great Britain especially), but also neighboring smaller states. It is thus that living political formations look in our time, rather than like the organization upheld in Geneva. A League of Peoples is developing amongst us, it is true, but much is still lacking to make it more than a hope.

Just as little as any thoughtful human being can ignore the political crisis precipitated by the World War, equally little can one disregard the industrial crisis typified best by Russian Bolshevism. Undoubtedly a new era has come in so far as the public attitude towards business combinations is concerned. In view of Russian experience the delusion that such combinations are mere headless mechanisms, propelled by crude desires and accidental necessities and intrinsically hostile to one another, is fading. Though the Marxian fanfare be ever so noisy, though anarchical economic thought speak ever so respectfully of the "creative power" of the masses, it is already evident that results in the industrial conflict can be expected only from men who are inventive, who reason clearly, and who can master the

problems of organization. In vain does social democracy dream of such men, whom it expects to ask no pay. Undoubtedly, however, disciplined, unselfish industrial captains would be as influential as they would be noble. They could halt dissolution and lay new and needed foundations for the common weal. We may optimistically hope for their appearance, but obviously they will not rise from socialistic ranks, incapable of releasing ascetic will-power as these have proved themselves to be. Here again the situation is critical: who will be victorious over the future—the impotent masses or the rulers of the spirit?

Science

In an epoch thus indescribably dishevelled, the work of science cannot be carried on in laboratories remote from the real world, quite as if nothing had happened just outside their windows. You may reply that martial events and economic disturbances can have no effect upon a mathematical demonstration. Nevertheless it so happens that a tremendous crisis has set in throughout the activities of science. In mathematics and physics this disturbance is typified by names like those of Einstein, Lorentz, Minkowski. Prior to its appearance, one could still earnestly inquire, as in Kant's time, if "the" space were ideal or real, if shape were a peculiarity in the masses of the outer world, or if it merely "appeared" to us to be so. "What space do you mean?" is the question asked today.

The old problem is ununderstandable now; it has become a knot in which too many threads are tangled. We know a "space," which is *subjectively* real; and regarding it we say, with Kant, that it is a form of our observation. It is the "space of representation" which the magic lamp of our fantasy discloses, illuminates and fills with mists as well as with bright pictures. But this area of representative

memory pictures and imaginative treasures must be just as definitely separated from the outer space occupied by real things as that is from "visual space" or "tactual space." In the "space of representation" there are no genuine perspectives: remote things can draw near and yet not appear large. Above all, however, one cannot apply exact measurement inside it. Even though lively day-dreamers succeed in spreading out before awakened eyes this space of our dream landscapes, no one can carry on inside it with rulers and compasses. Are there, then, *kinds of space* which we, in company with Kant, can term ideal, constructed *a priori?* Certainly. They are the mathematicians' conceptions of space, which are concerned with nothing so little as the question about what space encloses real bodies.

Mathematicians, it is true, chance upon their constructive notions by reason of incentive given by experience:—that is, a taut string suggests to them, as a postulate, the straight line, a stone plumping into the water reveals to them a line which then suggests the circle. But beyond the string and the eddying ripples their speculative gaze discerns far more perfect entities. Compared with the ideal entity "circle," the image traced by a pencil on paper is only a crude blur, which remotely suggests the ideal object. In similar ideal spaces the creations of the physicist also dwell—creations which, for example wholly homogeneous balls suspended without friction upon threads without weight, no human eye has seen in a similar state of perfection. Here exact fantasy conceives of "scientific spaces" which are objectively ideal.

These Euclidian spaces explored by healthy human reason, or the Riemann spaces discerned by highly cultivated intelligence, are not at all the same as the space occupied by the outer world of things. Kant's "Copernican act" is wrecked by reason of this newly discovered fact. It is true

that we measure gross material things by our ideally conceived things, for the reason that thus we can describe them most adequately in simple terms; but ideal space and real space never coincide. The mathematician is a moulder of ideal spaces. Without any reference to actual human sight, he conceives of a two-dimensional vision, incapable of seeing the central point of a circle, because this is shut in on all sides. Then he dreams of a four-dimensional visioning creature which can see the central point of a massive sphere, since that point is surrounded only in three dimensions. Such an inventor of ideal spaces needs very little contact with reality in order to describe these spaces correctly and exhaustively with analytical formulæ.

All this, however, does not answer the question which most deeply engrossed Kant—the question as to that space in which we plow our fields, sink our shafts, fire our cannon —the "real" outer space. Is this a form of our observation, in which we install our perceptions of trees in bloom as well as our dreams which happen in "representation space?" Or can we build for ourselves out of all things that have been observed a chest in which the things of the outer world fit as nicely as a collection of stones gathered by a geologist fits into the drawers of his cabinet? Those who precipitated the crisis in physics have made the startling discovery that both of these suppositions are false. They have gone directly to tangible masses with rods and light signals, with all the modern apparatus of measurement. They have attempted to inlay our observed perceptions (which are the most irrefutable of facts) into spaces constructed *a priori*, and they have found that it could not be done.

If we persist in such attempts, we must bend, distort and bulge out all space chests in order to make our observed perceptions (trees in bloom, for instance) fit into them. Accordingly the cosmic space is not a "form of our observation

a priori"; but it is also not an absolute world-enclosure which can be measured without reference to the moving masses (stars) which occupy it. Not only is our normal human common sense convinced of the real existence of individual things having form, not only have we gained a conviction, irrefutable in practice, that we see, deal with, pulverize, melt, combine, change real masses (not appearances or experiences),—but *whenever we measure space we must deal with real masses.* Over and above our "representation space" and the "visual space" and "tactual space" of perception, in addition also to the ideal spaces of pure mathematics, there exists a "space of reality"; and each of all these is clearly distinguishable from the others. Existing masses form the "space" of reality around themselves. These coarse *things* create not merely a place in space but *a space* for themselves. Through their movement (and quite apart from processes of heating and cooling), they alter the space (not merely the spot in space) which they occupy. Acting upon their environment, they re-form space, bend and curl it even.

The Crisis in Physics

The results of such measurements so vitally affect deeply rooted conceptions that since they have been arrived at one may speak of a crisis in physics. New insight has been gained which does not, of course, undermine the legitimacy of science that is calmly based on experience, but which does ruin the structure of monistic materialism. To what extent the proponents of this materialism had glorified the declaration of "all authoritative scientists" that the cosmos is endless in regard to space and time! It was announced as certain, eternally abiding truth, as the most precious discovery of modern times. And what a magnificent step forward humanity was believed to have taken with that dis-

covery! Today the Aristotelian doctrine of the finiteness of cosmic space is modern once again. We see the real world as limited, yet not in any way bounded with something like a fence. It is finite and nevertheless boundless, just as the surface of a ball is finite in spite of the fact that it nowhere presents a sharply defined boundary such as the edge of a sheet of paper, for example, offers.

Let us bear in mind what a quantity of derision was expended by prophets of monistic "advancement" upon traditional, particularly Christian, philosophers because these continued to cling (even though the salvation of the soul did not depend upon it) to the Aristotelian concept of the finiteness of the cosmos even after the time of Copernicus. At the "present stage of investigation," however, we find there is no absolute world existing independently of masses and their changes of location. Time itself would perish with the disappearance of the cosmic masses. And so a profound idea elaborated by St. Augustine here finds an unexpected confirmation. Every moving mass-system conducts its own reckoning of time. Time does not pass with the same rapidity on all the stars. Even if an "inhabitant" of Halley's comet were a Frenchman, he could not set his timepiece by a Paris chronometer. Every moving thing has its time, not merely its period of existence. The history of a point in time and space, of a "cosmic point," has now become more fascinating and complex than all of the once absorbing adventures of a drop of water.

We must pass on, however, and note that the crisis in physics has proved very valuable to the development of all the separate sciences as well as of current views of the world. Try to conceive how these alterations in scientific teaching must confound a genuine "riddle of the universe" monist. He built upon nothing so confidently as upon the law of the conservation of mass. The significance of this law he

announced in far too many hymns, to enable him to chuck it overboard now. It is not too much to say that twenty-five years ago he would have sentenced a fellow-philosopher to a life term in an insane asylum for teaching that such a law could be accepted only as approximately correct. Now that law has become merely a formula that was once scientifically useful, and which can still render practical service inside a restricted area of facts. Science teaches that a heavy mass alters itself according as its celerity changes. Its investigators are not labeled as ridiculous, however, and the world has not collapsed.

They are now able to define more precisely the existence of material substance and of universally dominant mechanical causality. If we conceive of some crude thing in the outer world as alternately finely striped and checked through and through, then we can pertinently describe its thing-state as the preservation of a very close neighborhood between these bright spots. In this manner we can proceed, in our description of substances, to indisputable observations and facts. Dissolution of that "neighborhood" is equivalent to the destruction of that crude thing. Similarly our aim in discerning causal relations must be to follow up with very small steps close and unseparated "neighborhoods" in time and space. If this "affinity" in time and space is missing between two events, they may nevertheless be dependent one upon the other; *but their relations are not governed by constant mechanical causality.*

Thus we understand why it is that "natural laws" have always been successfully proved to exist there where there are moving real masses in time and space, and where there exists a measurable exchange of energy. The "natural laws" accepted by all contemporary investigators are unequivocal and adequate mathematical formulæ for the description of universally effective causal (mechanical) de-

pendency. All other "laws" which have been proposed reveal themselves, in the light of newly attained views of mechanical causality, as mere feeble analogies. There are regularities in historical development, but there are no laws; there are uniformities in human spiritual life, but there are no laws of racial psychology. Today we speak less magniloquently of "universal laws" than our grandfathers did. The rash assumption that all science is merely knowledge of laws has been abandoned: for even grammar is found to get on very well with mingled rules and exceptions. Only since we have arrived at our more precise definition of mechanical causality—in connection with which the name of Schlick should not be forgotten—has it become clear as day how many other forms of dependency exist. Between a passionate emotion and a resolve to hate, as these enter human experience, there exists, for instance, a form of dependency. But since emotion and resolve are not contiguous in space, it is obvious (the matter requires only a moment's thought) that the stiletto thrust does not depend "with mechanical necessity" upon the word that was insulting—the more obviously since all talk of psycho-physical parallelism has become unfashionable. Of this more will be said in a later paragraph.

Chemistry

The upheaval in the domain of chemistry is quite as impressive as the crisis in physics. The alchemists of the Middle Ages had bequeathed a golden opportunity to the wits of the Age of Enlightenment. But our present time is pursuing the goals of alchemy (though of course with different methods) with a success that cannot yet be estimated. Naturally one accepts with a grain of salt such statements as that in radium science has discovered the "philosophers' stone," out of which, through atomic dis-

solution, a wealth of other elements proceeds, and which, spreading rays and warmth about, discloses a power of healing—all of which is quite as it should be in the case of a "philosophers' stone." But the mere discovery of atomic dissolution is a severe blow to classical materialism, which always conceived of the "atom" as "that which cannot be divided."

Modern alchemists are also liberating unsuspected energies. And who knows how long the earth's "alchemic" heating system (a recent discovery) can ward off from it the fate of the moon? How near are we to the coveted day when transmutation of elements will be possible? These are popular questions, the mere asking of which shows how wrongly the materialists had guessed. We know that scientists are building models of atoms, thereby bringing the concept of stratification into new prominence. Even organic chemistry cannot get on without such models, and they are indispensable to the crystallographer. It is realized that the individuality of a material substance depends upon the structure of its most minute parts, and upon the ordering of those parts in space. Some day it will be perfectly clear that Rutherford and the Curies, in resurrecting "alchemy," have also restored to prominence the Aristotelian concept of form, which men like Büchner thought they saw buried in lasting oblivion.

Biology

In the science of life—biology—matters are also less tranquil than they were at the close of the nineteenth century. No attention is now paid to fables of "spontaneous generation" and the "flaring up of consciousness" in soul-cells. Reason is no longer conceived of as a by-product of cerebral processes. It is accepted as a fact that the "normal" man

is as much an ideal object as the mathematical pendulum, and an effort is made to realize the ideal construction fruitfully instead of surrendering to the banality of those laboratories in which work goes on without requiring any attention from the supervisor. Particular processes in the body of a living being are explored more fully with the help of physico-chemical methods, and often the results are notable. Nevertheless it is admitted that no such processes can be described exhaustively with these methods alone. Sensory phenomena cannot be investigated thoroughly unless *sensation* is included in the description; and "innervations" are inseparable from voluntaristic resolves. Expressive movements quiver through the whole body, even into the most intimate fibres, and the regulation of rotatory movements is always subject to psychical influences. And one who doubts that the psychical element is more closely interwoven with the physical than everyday consciousness reveals, should observe how much is brought to light by suggestion and how evident it is that hysterical disturbances of the equilibrium between body and soul cause deeply rooted "functional" disorders of the whole organism, without the aid of poison or bacilli.

The psychical happenings are, however, too elusive to be discerned by the psycho-physical method alone. But gradually the mistaken fancy that the causal explanation of particular processes indicates the mechanical origin of the living being is going out of style. We can concede to the nineteenth-century rationalist that the body is a chemical machine, provided he in turn recognizes the fact that no machine exists which does not owe its origin to an intelligence. If we explain the "how" of organic functioning in terms of mechanics, the "what" and "when" still remain to be accounted for teleologically.

"Entelechy"

How a dynamo runs can be satisfactorily set forth in the language of physics. But *that* it runs and *when* it runs depend upon the engineer, his intelligence and his purpose. By reason of such necessary distinctions, the Aristotelian notion of "entelechy" is also becoming popular once more. An organism bears its purpose within itself. What purpose? Self-preservation and self-development. It is true that this earnest aim is not a part of its everyday consciousness; and so Hans Driesch (whose name history will associate with the present crisis in biology) correctly says that the vital force is to be viewed as "psychoid," *as if* it were a conscious will to live. It is likely, however, that an omniscient knowledge, looking deeper into the soul than human introspection can, would find the "will to live" an earnestly entertained purpose—an action of the soul. Naturally if we ask the average man if he desires to preserve his life, he will answer frankly, "I suppose so," without manifesting any serious intent to do so. But if his existence or growth are threatened, he cries out with unmistakable earnestness, "I want to live!" Then the "will to live" of the soul is summoned over the threshold of everyday consciousness, and it is evident how well the soul knows the vital goal of the organism.

The soul knows and wills the preservation of the body as soon as that is questioned in any manner associated with pain; and thus it reveals itself as "entelechy." It is this soul also which effects an adjustment with a new environment that has been experienced by no ancestor in the same way, and which knows how to find new paths to new individual purposes, thus accomplishing its object and shaping the future. It is, therefore, above all that earnest struggle with a resisting and hostile environment which a courageous

man carries on that gives him certain convictions, irrefutable in practice, which we normally ascribe to normal human reason: insight into the individuality of the body, the soul and the world outside—convictions which a wordly-wise philosopher in his easy chair does not always arrive at so easily. The new vitalistic teleology is, therefore, remote from the bleak "everything has a purpose" theory of deistic thinkers, according to which heron feathers were made for ladies' hats and biochemical investigation was governed by the principle of causality. The vitalism of the future does not seek to replace mechanical explanations: it renders these fruitful, and merely opposes the attempt of materialistic metaphysics to misapply physico-chemical methods to the life of the soul. If a physiologist ever finds living albumen in his retort, well and good. The life there will be Divine in origin; and so there is little use continuing a discussion which experience only can bring to a close.

Experimental Psychology

In psychology the danger was imminent that experimental machinery, once set in motion, would spin on merrily even though the person in charge ceased to think about what was happening. A crisis in this realm of study was, therefore, also inevitable. This does not mean that older labors in psychology—or in any field of study, for that matter—have been rendered worthless; but it does mean that investigation has not been able to proceed in the same routine. Neither the isolation of a thing nor an exact reproduction of an experience is possible in psychology, though both are commonplaces of physics, and therefore *verification* is of doubtful value to the first. The gain would have been greatest where experiences seldom encountered, newly conceived of, or astonishing—such as fascinating lights, quick flashes of moving radiance, strange rhythms,

synthetic vowels—were summoned to consciousness. In dealing with such matters, the experimental psychology of the future will have a plenty of useful occupation, particularly if it ventures to concern itself with valuable matters which attract man's entire attention—uncustomary acts of thinking, rare shapes, deliberate distortions of canonical forms, fantastic selection or choice.

But if it is to deal adequately with these, psychology must free itself of the philosophy of sensory atomism and pseudo-mechanics which has clung so peculiarly to it. Crudely enough theorists had fashioned after the likeness of the physicist's theory of elements certain little "clumps of sensation" and "crumbs of representation" which no one has ever sensed or represented. Then they suddenly found themselves committed to the declaration that mechanical fluctuations of these tiresome kaleidoscope-elements, reeling off in time, wholly constitute the "life of the soul." This mere phrase could not be seen through for a long time because the human spirit, in its indescribably sensitive adaptability, can be made to resemble an automaton, quite in the same way as a pretty actress stirs up eddies of applause by appearing in operetta as a doll.

We spoke of that human spirit as a "memory automaton," and found it stunning in the rôle of an "associating" doll. But often the man in charge of the experiments failed to observe that outside his laboratory the stiff limbs of his subject relaxed, that it did not, for instance, join words according to the laws to which it willingly subjected itself while good-naturedly learning a multitude of syllables according to the directions given by the psychologist. Of course the study of artificially simplified soul functions has meaning and value, but one must clearly understand that the experimental conditions gain (not lose, as have so frequently been supposed) their peculiar pertinence through

the fact that they operate suggestively, that the conductor of the experiment often trains his subject, and that only so many strict laws apply to psychology as the soul in its docility is willing to abide by during the laboratory period.[1] Furthermore the whole endeavor would be futile if one overlooked—instead of looking over—the whole activity of the soul (its acts and functions) while considering partial contents of consciousness.

The Crisis in Psychology

Precisely at this point the crisis in psychology manifested itself most clearly. It was ushered in by Husserl and his school, though it had been anticipated by A. von Meinong [2] and others. Since these men have been active, a whole field of genuine teaching about the soul has been opened, in which clear-sighted knowers of men are destined to make discoveries and go nearer to mastery. We no longer regard sensation as a heap of stiffened little globules of impressions. Colors reveal to us the shapes of things (even though no logical "conclusion" is involved), the tips of our fingers touch real materials, perfume speaks to us of the individuality of volatile matter, and within the organ's deep notes is contained the trembling of the church's walls. Our representations (says the modern psychologist further) are by no means merely "memory pictures"—little plaster-casts of sensations. Often sound, as it arises in memory, is far less a reproduction of a melody than a gentle complaint, sorrowfully brought back from distant yesterdays. Sensations and representations, coming to us under the blue sky of a mountain country, are accompanied by a wealth of feel-

[1] The word "laws" as used here does not, of course, mean the indubitable regularities of all psychical life.

[2] Alexius von Meinong (born 1853) is the author of treatises on psychology and scientific method.

ings, moods and passions which we cannot explain as part of a mechanism of pleasure and non-pleasure, tension and relief. In the convincing presentation of this intimate world, in the delicate sketching of differences and relations not ordinarily noticed, psychologists like Max Scheler have rendered great service.

For Scheler the abstractions of science do not tear asunder the spiritual bond that welds together things which are inseparable; and so he does not have to write hypothetical causal relations into his description, where dependencies of a totally different character prevail. Trivial pronouncements, such as the atomistic theory that one cannot experience pleasure and not-pleasure at the same time, are opposed in his psychology with pictures like one of a man in mourning, whom the coming of a friend honestly makes glad. Or he thinks of an enemy, furious with hate, who is obliged to realize the nobility of his foe, even while the hate is not dissipated by that recognition of nobility. The soul's peace and sensory enjoyment are not one and the same pleasure to this psychology.

Metaphysics

We may note, moreover, that there is a profound similarity between the crises in the various sciences. The revolution in physics permits us to separate psychical from physical phenomena, and even to investigate the border-line between the two. Among physical, *but not among psychical*, phenomena, continuity of space and time prevails: in describing physical phenomena the effect of energy may be emphasized, as is not the case when psychical phenomena are under discussion. There follows the important conclusion that experiences cannot be explained as derivative from physical processes, and that their interdependency is not universally causal (the word being used in the sense ac-

cepted by modern physics). These views, held in common by all departments of science, do not only impel a crisis in metaphysics, but they also incite us to deepen the psychology of those occurrences which the metaphysical and psychological discussion of the nineteenth century hastily passed by—choice and will.

If we go to the bottom of recent discussions of the problem of free-will, we constantly find something between the lines which is not heralded out loud—timidity in the presence of the "authoritative natural scientist." This fearfulness would be understandable if the man held in such awe had accomplished what his reputation assumes he did—a scrupulous investigation of the facts in the case, of will, desire and choice experiences in their manifold variety. Instead of that we have received nothing more from him as his statement on the subject than a meagre deduction. Every event (so it was affirmed)—and, therefore, also every resolve to act—has its mechanical cause: an earlier event which necessarily brings it about. To this we may oppose more than merely the insufficient retort that dependency within the soul is not spatial or dynamic in character, is not mechanically caused.

The crisis in physics has now forced everyone to abandon as hopeless the endeavor to sketch anything like a parallelogram of volitional energies. But that does not yet immediately compel one to surrender the idea that the experience of freedom (which in itself has never been seriously denied) is a self-deception (an illusion). The idea does, however, face one great difficulty. We can segregate volitional deceptions out of the fulness of volitional experiences equally as well as, in other domains of psychology, we can differentiate between hallucination and perception, between sham and genuine feeling. Occasionally a man may believe through suggestion that he is acting of his own volition, and

he may regulate his conduct mistakenly upon the strength of that suggestion. But anyone who sought to conclude from this fact that *all* belief in freedom is deception, would have to agree that all perception is hallucination.

This is not the place to enter into a discussion of the fundamental characteristics of the volitional life, so often disregarded by deductive theorists—experiences such as the examination of motives, the abandonment of plans because of study of the means needed to carry them out, and the calming of passion through attentiveness. The nineteenth century accumulated examples to serve only one preconceived hypothesis—at least, every one of the volitional experiences noticed by the dominant psychologists was explained as "self-deception" if it did not fit into that one hypothesis. To one person it seemed proper to assume that there was irresistible surrender to an instinct or motive, to another the equally real fact of a passionate struggle between motives without a decisive outcome seemed the actual condition of affairs. And yet nothing would have been more helpful than a comparative review of the manifold instinct-forces, and an elucidation of all that world of occurrences which is summed up by the term "motivation." Not all motives which influence us hail from the outer world, not all are rooted in the urges of the body; many are summoned by us and come obediently, like images of the imagination, and cause controlled processes of affecting, which more and more completely dominate the motives which originate outside ourselves.

In schooling the will we endeavor, for important human reasons, to win a victory over ourselves by stratagem, so that we can *will* what at first we merely *desired* without being able to accomplish—the noble has superseded the ignoble. The ruses with which leaders control masses of men serve the individual well in regulating his own household. And

yet, though our resolves are all motivated, it does not follow that our motives compel us. They are not autocrats but oracles; and it is this difference with which those who have developed the crisis in contemporary study of volition are most concerned. We must distinguish between motivating *causes*, which are compelling, and motivating *reasons*, according to which—after having assented to them—we regulate our conduct. The less that motivating causes impel the free man to act, the more scope he allows to motivating reasons, the more necessarily will he make up his mind in favor of the best course of action. This moral necessity, which refrains from saying moodily "I might have done otherwise," is not a form of slavery but rather an entirely free decision that follows earnest consideration. The resolve to regulate one's action according to the noblest motivating reason has its origin in that freedom which is deeply rooted in human personality.

The Theory of Knowledge

Here we see, what is visible in all the revolutions in contemporary science, the urge that impels us towards a metaphysical solution of our problems, towards primary knowledge of the things that are worth knowing, of the concordances of cosmic reality. For the first time since Descartes, a union between the investigation of nature and philosophy proper is possible and already fruitful. Prejudices once formidable in that theory of knowledge which is the foundation of metaphysics have been dissipated. The English Age of Enlightenment was unsettled by the query as to how the abstract idea of a triangle might "look," seeing that it must be obtuse and acute at the same time. We now have been made to realize again that an accurate and exhaustive opinion about all triangles is not itself three-cornered, but is essentially without surface of any kind,

just as our concept of motion does not itself need to be moving. Thus the "minute image" theory, according to which truth is known when a "representation-image" coincides with a "perception-image" (quite as a shaky hand might superimpose one paper triangle upon another of the same size) has been transcended.

The crisis in the theory of knowledge is deeply indebted to such men as Husserl and Külpe, who proved in a manner genuinely scientific that we can know more about the nature of things than Kant's critique had been willing to allow. Husserl's "contemplation of essences" had soon proceeded from the description of knowledge and intention to the analysis of quality (in contrast to the quantitative analysis of physics). This "contemplation" desired to remain aloof from disputes about the reality of things and souls. It could see as much of the essence *red* in a rose petal as in some dream of the setting sun. As yet, however, the limitations of Husserl's method have not been indicated, nor has that method itself withstood the historical test. Very likely it has still to meet a great danger, of the same sort as threatens every philosophy that is significant—the danger of distortion at the hands of its disciples. We already notice, for example, that it would be purposeless to speak of "contemplation of essence" where observation is genuinely fruitful; that nothing can be known through such a method which is correctly arrived at by means of the separate sciences; and that "contemplation" cannot decide about existence or not-being.

The Coming Attitude

It is occasionally worth while to think ahead some twenty years to a time when, as history seems to predict, there will descend another materialistic deluge. But whatever date a new materialism may bear upon its title-page, it is our

task to see that it finds opposition in a metaphysical philosophy which has not compromised its position. And so it is necessary to be entirely reasonable when one tries to talk in the language of the present time about eternal fundamental problems and their solutions. We must try, however: the scientific task calls for completion. Fortunately enough, within the boundaries set for us who are merely men and women, there is a philosophy which now rises with a transcendent vitality from out of the crisis in learning. This will not attempt to reason objects or souls out of the world. If there be question of color, its answer will not be, "Color is a wave length." An enquirer about Hamlet will not be told that the Melancholy Dane is a series of atomic movements in Shakespeare's brain.

Quite as little shall we be satisfied when woodland and field are "explained" as "appearances." We shall not watch some philosophic mosaic-worker piece the soul out of sense images, nor shall we believe that a soul viewed from within is that which a physicist terms a "nucleus of energy" (perchance an electron). Our time realizes once again that the primal phenomenon is that duality of the world which is found expressed in spirit and material, body and soul, stimulus and sensation, matter and form, God and the world. If we cannot know this, how shall we know anything? It is true that no one has illuminated the gulf between the individual kinds of primal being. That is the prize to be wrestled for by the future. But we shall safely describe the soul which forms its body and without it would not be a personality as something wholly different from "component parts" or "special processes" of the living entity. We need not, therefore, share the supposition of the eighteenth century that there can be no close community between things different in character. What two things are more different than a sun-ray and a process in the visual nerves? Never-

theless one depends upon the other. We are likewise taught, by the practical experience of a day filled with work performed with cheerful responsibility, that there is an interchange of relations between body and soul. We simply cannot believe any longer that Napoleon's brain and hand wrote those commands which altered the world, while his cold thinking and wild resolves tagged along beside. We are convinced rather that the chess-player is not always mistaken in believing that he can read the thought of his opponent in the play. Yes, the more deeply we concern ourselves with the details of the multiform world, the more closely and strangely do spirit and matter seem interwoven.

The End

Whether the color of a rose belongs to the leaf more than it does to the human admirer, is often hardly determinable. It is my red when I gaze at it, the rose's red when I turn away, and God's red it will be when my eye will long since have ceased to discern the beauty of flowers and the rose also has gone. Shapes, accepted from reality or self-created, likewise hover on the border between "mine" and "there." But enough of this. If we think out carefully to the end those ideas about time and space which were introduced by the crisis in the modern sciences, we shall pause in the presence of Him who, omnipotent and omnipresent, envisages all relative areas of space and time, being Himself eternal and beyond space—the Former of all forms. Concerning Him our best knowledge is, of course, only an analogy. We speak of Divinity in symbols only. The little arrow of human thought and human vision of God disappears all too quickly from our sight; but grace will have it that our bow can nevertheless wing the shaft home. Thus once again it is a crisis in philosophy which forces us to approach the sources of religious faith.

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